

721

# THE BOSTON Medical and Surgical JOURNAL

VOLUME 196

MAY 5, 1927

NUMBER 18

## NEW ENGLAND SURGICAL SOCIETY

### REPORT OF A CASE OF FIBROMATOSIS OF THE PELVIC COLON\*

BY PEER P. JOHNSON, M.D., F.A.C.S.

THE chief interest of fibromatosis lies in the fact that it is a condition liable to be mistaken for carcinoma. I have adopted the title employed by our English brethren although I do not find the condition mentioned in our literature under it. Possibly it would be better to call it a chronic interstitial colitis, for it is a chronic inflammatory process involving the whole wall of the bowel for a variable distance. The bowel is indurated and almost as rigid as a garden hose. The infective agent finds its point of entrance through some break in the mucosa or by extension from inflammation in a neighboring organ to which it has become adherent.

As there is marked narrowing of the lumen of the bowel the symptoms are apt to be those of a chronic obstruction, constipation alternating with diarrhea, blood and mucus in the stools and abdominal pain. Although the location of the obstruction may be often determined by physical examination, sigmoidoscopy and X Ray, its true nature can rarely be determined except at operation. Often then, unless the surgeon is on his guard and if he confines his exploration to the sense of touch only, he may confuse it with cancer.

The treatment consists in excision of the affected bowel when possible, although the diseased bowel may return to normal after a long period of rest resulting from a short-circuiting operation or artificial anus. In this respect it resembles those more localized tumors resulting from chronic diverticulitis which have been reported as disappearing after conservative operations. Many of the cases which are supposed to have been carcinoma recover, much to the surprise of the surgeons and sometimes to the credit of the cults.

No. 23142—A white man, age 51 years, truckman, entered the Beverly Hospital April 4, 1926, complaining of low, severe abdominal pain and frequent blood-stained mucous dejections.

His illness began one week previous to admission when he was suddenly seized with a violent, intermittent pain referred to the umbilicus, lasting from ten to fifteen minutes and immediately followed by

vomiting and the passing of a copious normal movement of the bowels. About four hours later he had a second attack of pain, followed by a second defecation. For several days thereafter the intermittent attacks of pain continued, accompanied by frequent, small, watery movements. Desire to defecate was urgent. On the fifth day he was so much better he resumed his work as helper on a delivery truck but, during the middle of the morning, he was seized with another violent attack of pain, similar to the first, and was obliged to return home. From then on, he had frequent attacks of severe, colicky pain, slight at onset, increasing rapidly in severity and accompanied by small, blood-stained, mucous discharges from the rectum. A doctor had been in attendance for two days only during which time he had administered morphine for the relief of the pain.

The family and past history contributed nothing of value.

On admission temperature was 98, pulse 64. The physical examination was negative except for the abdomen. Here there was marked tenderness in the left lower quadrant and hypogastrium with the suggestion of an indefinite mass. The rectal examination gave tenderness well up on the left but no mass could be made out.

Urine was negative. Wassermann was negative. Blood showed the hemoglobin 80%, white count 11,200, Polys 85%. The stools contained nothing but mucus and blood. The provisional diagnosis was pelvic abscess, secondary to a diverticulitis or appendicitis.

He was under observation from April 4 to 9; during this time his temperature varied from 98 to 101. The pain in the abdomen continued, accompanied by frequent, small, blood-stained mucous dejections. At first the movements were every ten to fifteen minutes but with starch and opium injections the frequency decreased somewhat. On April 7, his white count was 20,000 with 90% polys.

A proctoscopic examination could not be made. A small barium enema showed narrowing of the lumen of the rectum and sigmoid, which rose sharply above the promontory of the sacrum, but the barium passed readily to the splenic flexure. After expulsion of the enema, the rectum and sigmoid were empty but the colon above remained outlined for twenty-four hours. A rounded mass was observed above the symphysis which remained after catheterization although it was somewhat smaller in size.

For several days the patient had difficulty in urination and finally retention on April 6. On April 7 there was moderate abdominal distention with marked tenderness and rigidity over the whole lower abdomen.

Inasmuch as the patient was becoming exhausted from frequent dejections, on April 9, operation was

\*Read before the New England Surgical Society, October 1 and 2, 1926.

done under gas oxygen and ether, with the expectation of draining a pelvic abscess.

(1) Pre-operative Diagnosis—Pelvic abscess from acute diverticulitis or acute appendicitis.

(2) Post-operative Diagnosis—Fibromatosis of upper rectum and lower sigmoid.

**Operative Findings**—With the patient under the anesthetic, a definite mass could be felt in the lower abdomen, considerably more marked on the left than on the right. The peritoneal cavity was opened through a small incision low down in the left rectus muscle near the median line. On introducing the finger through this opening, a very hard, definite mass could be felt which gave the impression of carcinoma of the sigmoid. The incision was then enlarged to permit free inspection and the distal half of the sigmoid and upper rectum was found to be swollen, firm, purplish in color and so fixed by the rigidity caused by the swelling that it could not be moved. There was no free pus and no diverticula could be discovered. The epiploic tabs and mesentery of the sigmoid were infiltrated, firm and tense. This appeared to be an acute inflammatory process involving the wall of the sigmoid and rectum. An examination of the remainder of the abdomen disclosed no pathology.

Owing to the fact that the upper rectum was involved with the sigmoid a resection was deemed inadvisable, therefore a colostomy was done.

On the day following the operation, the loop of sigmoid was opened. Five days after the operation the frequency of liquid dejections had dropped from twenty-one to eleven. These stools were watery and contained small particles of feces. Pain had practically ceased.

On April 15 rectal examination revealed less tenderness but a bulging in of the mucous membrane. Blood examination on this date showed white cells 21,000, with 90% polys. On April 20 a firm, annular constriction could be felt at mid rectum which felt exactly like an annular carcinoma. This, however, had nearly disappeared by April 25, although patient still continued to have from six to eight watery dejections in twenty-four hours. Improvement continued and by May 25 the patient had two or three soft, normal movements per rectum daily. Colostomy was not functioning as freely as before.

On June 12 the patient was up and felt fine although the bowels moved six times. The next day (June 13) sixty-five days after operation, after his return to bed, he complained of feeling faint and soon lapsed into unconsciousness. His breathing became stertorous; the body rigid, with head thrown back, followed by convulsive twitchings. The pulse was not perceptible at the wrist and heart sounds were weak and distant. He soon regained consciousness, complained of severe epigastric pain and vomited. The vomitus was colored red and contained particles of what appeared to be cherry skins and curdled milk. There followed several attacks of unconsciousness, with convulsions, ending in death.

A post mortem examination of thorax and abdomen did not reveal the cause of death. Numerous loops of small intestine were found adherent to lower half of sigmoid and rectum. This portion of the sigmoid and upper half of the rectum were greatly thickened and the sigmoid was firmly adherent to the posterior abdominal wall. For a distance of five inches the rectum and sigmoid were studded with small superficial ulcerations. Section of the bowel showed marked infiltration of small round cells and fibroblasts in all layers, including the mucosa when found, but in several of these sections the mucosa and a small portion of the submucosa had disappeared. An unusual number of plasma cells were found. The anatomical diagnosis was chronic inflammation of lower sigmoid and rectum with ulceration. A pathological report from the Cancer

Commission of Harvard University confirmed the diagnosis of chronic inflammation.

Inasmuch as it was learned that the patient had been brought cherries and ice cream by friends the afternoon of his death, the possibility of accidental poisoning, as a cause of death, was considered, so the vomitus was sent to Dr. William F. Boos, who made an exhaustive examination. His conclusion is quoted: "As the result of my investigation I found that the material in question, i. e., the vomitus obtained from Mr. —, did not contain the volatile poisons of Group I, alkaloids and other organic poisons (Group II) or the heavy metals (Group III). I did, however, find present in the vomitus both ethyl and methyl alcohol. Since it appeared from my analysis that these two alcohols were present in about equal amount, Mr. —, sometime prior to his death, must have ingested a beverage containing approximately equal amounts of grain and wood alcohol. Such a beverage is very toxic and its ingestion might well account for the fatal issue in this case, especially if the victim was not habitually alcoholic.

"Although, as I have said before, the chemical picture of his last illness, as you gave it in your letter, is not characteristic of death from wood alcohol poisoning, convulsions are often seen in this form of intoxication, particularly when death occurs fairly rapidly. The finding of wood alcohol, and the absence of any other poison, therefore lead me to think that Mr. — may have died as a result of drinking some form of liquor which contained a lethal dose of wood alcohol."

Whether death was due to poisoning by wood alcohol or not, it is obvious that it was not caused by the disease for which he was operated upon, or by the operation itself.

The symptoms of this patient after the admission to the hospital were those of a proctitis, but, in view of the sudden onset with pain and the appearance of an apparent mass in the lower abdomen, it was thought that the proctitis was secondary to a pelvic abscess resulting from either an acute appendicitis or an acute diverticulitis. The uniform narrowing of the lumen of the involved portion of the bowel, as shown by the X Ray, perhaps should have been of more significance.

Inasmuch as the intention of the operation was to open a pelvic abscess, a very small abdominal incision was made and the finger introduced received the impression of malignant growth which was only dispelled after the incision had been enlarged so that a good inspection of the mass could be made. Had the area of involvement been less, a diagnosis of carcinoma would undoubtedly have been made. At autopsy, 65 days after operation, the sigmoid and rectum were still greatly thickened, the wall being estimated to be four or five times thicker than normal. The appearance of the numerous superficial ulcers in all probability clears up the starting point of the entrance of the infective agent into the wall of the bowel, although it possibly is a fair question as to whether the ulcers were primary or secondary to the disturbance in the wall of the bowel itself.

A colostomy was done in this case because

the affected bowel could not be readily removed and also because it was not deemed necessary to do so, but the findings at autopsy indicated that, while there had been much improvement over the condition found at operation, the bowel was far from normal. It was evident that we had allowed the colostomy to close too rapidly and, if the man had lived, we undoubtedly would have been obliged to reestablish the artificial anus.

From the various reports of cases it is evident that these inflammatory masses may be cleared up by the formation of an artificial anus or sidetracking, but inasmuch as this is not an entirely certain method and because the fecal discharge must be allowed to escape upon the abdomen for a long period of time, a resection, when possible, of the affected portion of the bowel would seem to be the operation of choice.

## ORIGINAL ARTICLES

### DISSEMINATED SCLEROSIS WITH SYPHILIS

(With Report of a Case)\*

BY H. G. WOLFF, M.D.

It is my purpose in this paper to present the history of a case of disseminated sclerosis with a definite antecedent history of syphilis and to comment on the nosology of multiple sclerosis and neurosyphilis.

The concept of a possible syphilitic basis for disseminated sclerosis was probably originally presented by Jacobson in 1894<sup>1</sup>. The topic has been more recently investigated by Byrnes<sup>2</sup>, who has collected an ample bibliography.

Chart 1 is a comparison of the two diseases based on statistical, serological pathological, clinical and therapeutic data. The chart shows that, in certain respects, there is considerable similarity between the two, whereas in other respects there are marked differences. The outstanding dissimilar features are the age of onset and the presence of the positive Wassermann reaction in the spinal fluid.

In the recent literature, Adams<sup>3</sup> has reported 41 cases in which he found 4 with the blood and spinal fluid Wassermann reactions positive. He also found a paretic or syphilitic colloidal gold curve in 39 of this series. Ayer and Foster<sup>10</sup>, moreover, in their series found that about 45% of cases had a similar type of colloidal gold curve; no positive Wassermann reactions were encountered by them. Byrnes<sup>2</sup> reports 5 cases of disseminated sclerosis that he treated with anti-syphilitic measures. A history of chancre was obtained in one and a positive blood Wassermann reaction in another. More recently, H. Dufour and Duchon<sup>4</sup> reported one case with a positive Wassermann reaction in the blood and no history of syphilis. H. Claude and R. Targowla<sup>5</sup> also report a case of disseminated sclerosis with syphilis, and H. Dufour and M. Fernu<sup>6</sup> describe two additional cases with histories of syphilis, one with a positive Wassermann reaction and the other without.

\*The final studies of this case were made in the Neurological Department of Bellevue Hospital, New York City, on the service of Foster Kennedy, M.D. I am indebted to him for permission to publish my observations.

Considerable work has been done by various investigators<sup>12</sup> in trying to demonstrate that disseminated sclerosis is a spirochaetal disease. Collins and Noguchi<sup>7</sup> in 1923 reviewed the literature up to that date and did experiments on animals to determine the nature of the disease. Their results were inconclusive but they were led to believe that with culture material from cases of recent onset, more significant results might be obtained. Adams, Blacklock and McCluskie<sup>8</sup>, realizing the errors that might arise from the presence of a saprophytic spirochaete frequently found in experimental animals, feel, nevertheless, that the weight of experimental evidence from their own findings is in favor of the conclusion that disseminated sclerosis is caused by a spirochaete capable of being transmitted to animals and of producing nervous symptoms. The nature of the spirochaete is, to be sure, undetermined. The use of anti-luetic measures is strongly advocated by these workers. It is maintained that such treatments relieve symptoms and bring about an arrest of the disease. Jelliffe<sup>11</sup>, however, actually challenges the entire concept of etiological specificity in disseminated sclerosis and regards it as a symptom complex which may be caused by a large number of etiological factors, including syphilis.

Case No. 5 in Byrnes' series illustrates a feature that was very evident in the case about to be presented and which would seem significant. This patient, with a positive blood Wassermann reaction which subsequently became negative under treatment, was found, five and a half years after the initial lesion, to have developed a typical disseminated sclerosis. The blood Wassermann reaction, when tested during the interval, was negative.

The following case is somewhat similar. It is important in that serological tests were made both before the onset of any neurological symptoms and during the course of the disease.

## CASE REPORT

On February 8, 1924, a 21-year-old married woman presented herself at the Cornell Clinic, New York City, with a secondary syphilitic skin eruption. She had had her initial lesion a short time before. Her

ings of constriction about the waist, unsteadiness in walking, insomnia, and numbness of the right thigh. The examination showed the following positive findings: slightly irregular pupils that reacted promptly through a small arc; right perioral tremor, tongue tremor, slight swaying in Romberg's position, and

## CHART I

## SUMMARY

## COMPARISON OF NEUROSYPHILIS AND DISSEMINATED SCLEROSIS

No.	Quality	Neurosyphilis	Disseminated Sclerosis
1	Race	White most common	White most common
2	Nationality	All	Especially Northern European, Finnish, Scandinavian
3	Sex	Male more common	Male more common (3:2)
4	Age	Adult common (30-40) Juvenile rare	Adult common (20-30 = 70%) Juvenile rare (0-10 = <1%)
5	Congenital influence	Likely	Likely
6	Syphilitic history	Frequently present	Occasionally present
7	Positive blood Wassermann	Frequently present (tabes absent = 40%)	Occasionally present (probably <10%)
8	Positive spinal fluid Wassermann	Frequently present (occasionally absent)	Occasionally present
9	Cytologic reaction	Plasma cells Lymphocytes, perivascular, meningeal and radicular infiltration	Plasma cells Lymphocytes, perivascular, meningeal and radicular infiltration
10	Paretic gold curve	High in paresis (90%)	45%
11	Spinal fluid cells	High or low	Cases 0-5 = 29 6-10 = 8 11-20 = 8 21-30 = 2 42 = 1 (Ayer & Foster)
12	Onset with ocular palsy	Common	Common
13	Early involvement D-7 L-1	Common	Common
14	Pupil changes	Early—occasionally late	Later or not at all
15	Pathology (a) Caseation (b) Myelin sheath degeneration with preservation of axone	(a) Common (b) Rare	(a) Rare, but occasionally seen (b) Common, but axone degeneration is occasionally seen
16	Site of degeneration	In paresis commonly seen in boundary zone of cortex	Commonly seen in boundary zone of cortex
17	(a) Spirochetæ (b) Spirochetes seen	(a) Proven (b) In above area (16)	(a) Likely (b) In above area (16) (Schuster)
18	Infectivity to rabbits	Not uncommon (?)	Not uncommon (?)
19	Progression with remissions	Frequent—typical	Frequent—typical
20	Precipitated by trauma, physical or mental	Not uncommon	Occasionally occurs
21	Response to treatment (arsenic)	Meningo-vascular syphilis—good Tabes—fair Paresis—poor to fair	Poor

blood Wassermann reaction was positive. From February 8 until June 16 she received anti-syphilitic treatment in the form of mercury and neo-salvarsan.

On April 29, 1924, two and one-half months after the secondary lesion, a neurological examination was made. At that time she complained of periodic feel-

hyperactive knee and ankle jerks. The eye grounds and vision were normal. There was no strabismus, nystagmus, atrophy of tongue or speech defect. The finger-to-nose and finger-to-finger tests were normal. The biceps, triceps and radial periosteal reflexes were not unusual and the abdominal reflexes were present.



The Babinski sign was absent. Endocrine and vasomotor systems were normal. On May 14, 1924, her blood Wassermann reaction was slightly positive. On May 22, 1924, the spinal fluid showed 6 cells, colloidal gold curve 1223432100 and a negative Wassermann reaction.

On October 30, 1924, when seen again nine and one-half months after the appearance of the secondary lesion, her main complaint was numbness of the legs. Physical examination showed the patient to have the same positive and negative data as on April 29, 1924. On November 4, 1924, the patient was seen at the Roosevelt Hospital, New York City. After a bitter quarrel with her husband she had fallen over on her bed, crying, and had remained so for several hours. She found it difficult to get out of bed and came to the hospital complaining of numbness about the waist extending down to the toes, and difficulty in walking. Physical examination showed the same positive findings as above, but also an unsteady gait, wet cold hands, reduced corneal and gag reflexes and emotional instability. The blood Wassermann reaction was negative and the spinal fluid revealed 10 cells, no globulin, a negative Wassermann reaction, and the colloidal gold curve, 5555421000. On December 29, 1925, eleven months after the secondary lesion, the patient complained of dropping things from her hands, inability to walk, and numbness of the arms and legs. Physical examination then showed her to have a marked Romberg sign in addition to what had been previously found.

On February 5, 1926, two years after the secondary lesion, the patient complained that she was no longer capable of doing her housework. Her vision was failing and she was afraid of being run down while on the street. She entered Bellevue Hospital, New York City, at this time. The examination now revealed, in addition to what had previously been noted, bi-temporal pallor of the optic discs, nystagmus, absent abdominal reflexes, slight scanning speech, spasticity, and an occasional Babinski response, marked ataxia of the arms and legs, and slight euphoria. There was no loss of sphincter control and no sensory loss could be determined. Her blood Wassermann reaction was negative and the spinal fluid showed the same abnormalities as in November, 1924.

The salient features of the case are:—

1. The patient was seen early in the disease (disseminated sclerosis) and at that time, before the onset of central nervous system symptoms, she had a secondary syphilitic infection, with a positive blood Wassermann reaction.

2. Some two or three months after the date of her syphilitic infection, she developed central nervous system symptoms. At about the same time the blood Wassermann reaction became slightly positive and the spinal fluid colloidal gold test was of the syphilitic type, the Wassermann reaction being negative.

3. The disease progressed slowly but steadily, although the blood Wassermann reaction became negative at the same time.

4. The colloidal gold curve changed from the syphilitic to the paretic type, and the blood Wassermann reactions became negative between the third and eleventh month after the syphilitic infection.

5. Two years after the onset of the syphilitic infection, the patient presented a typical syndrome of disseminated sclerosis and the spinal fluid showed a paretic type of gold curve and a slight pleocytosis.

*Comment:* It is noteworthy that not infrequently histories of syphilis are encountered in cases of disseminated sclerosis, but that the disseminated sclerosis progresses steadily in the absence of a positive Wassermann reaction in the spinal fluid or blood. In considering the role played by syphilis in the case presented above, several possibilities must be considered. The syphilitic infection may be merely a coincidental finding, or the infection may act as a precipitating agent, paving the way for the onset of an independent disease syndrome.

Another possibility is that the syphilitic infection results in a severe metabolic upset outside of the central nervous system with secondary degenerative changes within it. This might be comparable to an acute infectious pancreatitis and the profound metabolic upset associated with the subsequent diabetes.

Still another possibility is that syphilitic infection starts a degenerative or infiltrative process which continues or appears after stress, even though the disease has apparently died out or retreated in the interval to an occult focus. This might also be compared to another type of intoxication. A patient suffering from chronic lead poisoning, although lacking the usual evidences in the blood, gums, etc., may still, after excessive strain, fall ill with colic. The elimination of lead in such cases aids in the ridding of symptoms<sup>9</sup>. Briefly,—it would not seem unreasonable to assume that we are here dealing with a type of central nervous system response to infection or intoxication. The etiologic factor or infectious precursor, is, in this instance, the spirochaete pallida.

#### REFERENCES

- 1 Jacobson, D. E.: *Hosp.-Tid.*, 1894:4, R. II, 17.
- 2 Byrnes, C. M.: *Jour. Am. Med. Assn.*, 1922:78, 867.
- 3 Adams, D. K.: *Lancet*, 1921:1, 420.
- 4 Dufour, H., and Duchon: *Bull. et Mem. Soc. Med. de Hop. de Par.*, 1923:47, 599.
- 5 Claude, H., and Targowia, R.: *Bull. et Mem. Soc. Med. de Hop. de Par.*, 1925:49, 77.
- 6 Dufour, H., and Ferru, M.: *Bull. et Mem. Soc. Med. de Par.*, 1925:49, 346.
- 7 Collins, J., and Noguchi, H.: *Jour. Am. Med. Assn.*, 1923:81, 2109.
- 8 Adams, D. K., Blacklock, J. W. S., and McCluskie, J. A. W.: *Jour. Path. and Bact.*, 1925:28, 117.
- 9 Aub, Fairhall, Minot and Resnikoff: *Medicine*, 1925:4, 1.
- 10 Ayer, J. B., and Foster, H. E.: *Arch. Neurol. and Psych.*, 1922:8, 31.
- 11 Jelliffe, S. E.: In discussion following the presentation of a paper by J. W. Stephenson, on "Diathermia in the Treatment of Multiple Sclerosis." *N. Y. Neurol. Soc.*, 1926. *Arch. Neurol. and Psych.*, 1926:16, 125.
- 12 Adams, D. K., Blacklock, J. W. S., Dunlop, E. M., and Scott, W. H.: *Quart. Jour. Med.*, 1924:17, 129.

## A REVIEW OF JEWISH OPINIONS REGARDING POSTMORTEM EXAMINATIONS\*

BY JULIUS GOTTLIEB, M.D.

THE number of necropsies on Jewish patients in fifteen of the twenty Jewish hospitals listed by Christian<sup>1</sup> in 1923 did not exceed 25 per cent. of the deaths, and in seven there were no necropsies at all. Christian, therefore, suggests that an active campaign of education on the part of Jewish physicians among the Jewish people would do much to correct this situation.

Apparently considerable feeling exists against the practice of postmortem examinations among the Jews. Merely to recognize this fact and to deplore its existence or to comment that it is justifiable or unjustifiable offers nothing constructive. It may be of value to trace briefly the underlying cause of this attitude in the history, literature, laws and traditions of the Jews, and to state various authoritative opinions in regard to its present status as a basis for a campaign of education consistent with the dignity of the medical profession and the most sacred institutions of an ancient people.

In such a survey we find that the earliest document regarding embalming among Jews is the Pentateuch. After Jacob blessed his children, "he charged them and said unto them:

'I am to be gathered unto my people, bury me near my fathers . . . in the cave that is in the field of Machpelah . . . in the land of Canaan.' " (Genesis, xlv, 29)

To carry out the will of his father, Joseph "commanded his servants, the physicians, to embalm his father, and the physicians embalmed Israel" (Ibidem, 1.2).

The second case of embalming is mentioned in the passage, "So Joseph died, being one hundred and ten years old, and they embalmed him and he was put in a coffin in Egypt" (Ibidem, 1.26). The body of Jacob was transported to Canaan immediately after it was embalmed (Ibidem, 1.2), but the remains of Joseph were brought to Canaan a few centuries later, when "Moses took the bones of Joseph with him, for he had caused the children of Israel to swear, saying 'God will surely visit you and ye shall then carry up my bones away hence with you'." (Exodus, xiii, 19). The only fact that is recorded in the Bible concerning the process of embalming is that it lasted forty days (Ibidem, 1.3).

Herodotus (Herodotus: ii,86) describes the process of embalming as carried out by the Egyptians of that day as follows:

"The brain was extracted by means of a bent iron instrument through the nostrils. The intestines were removed through an incision in the left side of the abdomen. The abdominal cavity was cleansed with palm wine and filled with myrrh, cassia, and various spices and the opening sewed up. The body was

then washed, swathed in long bandages of gummed cloths, and placed in a wooden coffin. The majority of the population kept the coffin of the relatives in their homes. The rich, particularly the kings, built extensive tombs, carved in stone and ornamented with figures and hieroglyphics which described the life and achievements of the deceased."

The art of embalming was in the hands of the priests and physicians, who kept it a secret. Even to this day neither the exact method of mixing the various spices nor of employing them is known with certainty. So perfect was their skill that the skin upon the feet of mummies two and three thousand years old is as soft and elastic as that of a fresh corpse.

Hence, the body of the Patriarch and that of his son must have had those organs, which are usually examined postmortem, removed from them in order to be embalmed. It is apparent therefore that no objection to this type of dissection of the human body could have existed among the Jews if it was performed on such important individuals.

Lauterbach<sup>2</sup> has conducted a survey of the Jewish attitude towards autopsies and comes to the conclusion that there is no opinion offered in the Bible, Talmud or Shulhan Aruch which justifies any objection to the practice of necropsy. In the Talmud various references are made bearing upon this question.

According to the Talmudic teaching, the human body contains 248 parts or joints and 365 sinews (b. Makkot, 23b). This theory is based apparently upon original research by the Rabbis, inasmuch as no reference for authority of this statement is credited to non-Jewish scientists. In the Talmud (b. Bekerot 45z) it is related that the disciples of R. Ishmael disputed their master's teachings when they found upon dissecting a human body that there were 252 joints instead of 248 as had been taught to them. Whereupon the master replied: "Perhaps you have examined the body of a woman." This affords further evidence that such examinations were actually performed.

The Torah declares the following law regarding the purification of those who come in contact with a cadaver:

"He that toucheth the dead body of any human person shall be unclean seven days, and he that purifieth himself not hath defiled the tabernacle of the Lord, and that soul shall be cut off from Israel" (Numbers, xix, 11).

Since this law of "tent defilement" was only operative in case the major number of the bones of the skeleton were present in the tent (Oholoth, viii, 1), the Talmudists were compelled to ascertain the number of the bones in the human body. Although Galen (Fabricius, Hierony-

\*From the Department of Pathology and Bacteriology, Boston University School of Medicine, and the Massachusetts Homeopathic Hospital.

mus; DeFornato Teta, iv) was cautious in expressing his opinion as to the number of bones in the human body and said "there were more than 200 bones," and Hippocrates (Hippocrates: 326, Geneva edition 1657) gave the total number as 111 (including the nails), the Talmudists, in the Mishna, enumerate minutely all the bones (Oholoth, i, 8) and give the number as 248. Rabbi Samuel, a physician, relates that his students had boiled the body of a lewd woman who had been condemned to be burned and that they counted 252 bones (Bekerot, 45a).

Permission for an autopsy being sought, to determine the age of a relative concerned in a civil suit which came up before Rabbi Akiba, a decision was rendered that in litigations involving monetary considerations, it is an insult to the dead to disturb his peace and that the body must not be disinterred (Baba Bathra, 154a). The law in reference to the exhumation of dead bodies reads:

"It is unlawful to remove the body or the remnants of bones from one place, to another, whether from an honorable place to an equally honorable one, or from a lowly place to an equally lowly, or even from a lowly place to an honorable one, not to speak of the reverse. It is, however, permissible to remove the same if the dead is to be interred among his own, for it is pleasant for a man to repose alongside of his fathers" (Schulchan Aruch Yore Deah, 362, 1).

According to the Talmudic-rabbinic law, all the laws of the Torah, excepting those against idolatry, incest and murder, may and should be violated, if necessary, for the sake of saving human life (b. Ketubot 192). The Talmudic law that the saving of human life sets aside the law of the Torah except in the case of the three conditions mentioned above applies also to doubtful cases. The mere chance of saving a human being should make us proceed and ignore the law (b. Yoma 88a) even though we are not sure that by the act involving the violation of the law we are to succeed in our purpose.

In the Talmud (Hullin 11b) it is argued that to dissect a human body may be considered disrespectful to the cadaver, a possibility which, of course, should be avoided. This, however, holds true when there is no good reason for performing the post-mortem examination. The Talmud further declares that if the examination may result in the saving of another human life, it is not only justifiable but desirable. The Talmudic phrase in Pesahim 4b may be construed to mean that it would be pleasing to the deceased to know that, in the dissecting of his body by physicians, facts are discovered that may be of benefit to humanity.

In the same source there are records of autopsies performed by the disciples of Rabbi Akiba (Bekerot 45a and Nidda 30b). It seems that these autopsies were performed not with the view of checking disease but for pure anatomical and embryological studies.

It is of interest to note that the people in Tal-

muldie days scarcely hesitated to break the bones of the dead for mere convenience and expediency, Zucrow<sup>2</sup>. It is related in the Mishna (Mishna, 2, Shkolim cha, viii) that the people who transferred the bones of the dead employed a special tool to break such bones that were too large for their boxes rather than build larger containers.

The present attitude towards postmortem examinations is largely based upon a decision rendered by Rabbi Landau published in his Responsa Noda b'Yehuda (210, p. 63b), a book known among the learned Jews as a model of logic and acute reasoning and embodying hair-splitting niceties. Landau's opinion was sought when the question as to the permissibility of allowing the performance of an autopsy arose. In this instance this privilege was sought by a surgeon whose patient died following an operation for gall-stones. Landau's brief of the case was thus summarized:

"When it concerns the saving of a human life there can be no question of the permissibility of an autopsy, because the saving of a human life supercedes all commandments of the Torah except three, the shedding of blood, lust and idolatry. In our case, however, there is no sick man present who needs to be cured immediately. For the sake of a similar case that might happen in the future we are not permitted to transgress an injunction of the Torah. For if we should minimize the importance of autopsies, God forbid, they would be practised on all the dead indiscriminately."

It is apparent that Landau instinctively felt that his argument was rather weak, for he fortified himself by adding:

"Even the Gentile physicians do not perform autopsies on all dead bodies, except on criminals condemned and executed or on those who willed during life that their bodies be subjected to an autopsy."

From the controversy, however, here recorded it is impossible to state definitely whether the autopsy was performed or not.

As a further indication of the present situation with regard to this question the following opinion obtained by the writer from Epstein<sup>4</sup> is quite enlightening:

"According to the decision (Landau's famous decree) we should say that an autopsy upon an individual who had died from a disease that is not prevalent is prohibited but that autopsies upon those that died from diseases that are prevalent or epidemic are permitted. Knowing hospital conditions of today it would practically give a blanket permission for autopsies. Historically considered, the fear of, and hence the shrinking from exposing the dead to view or being otherwise disrespectful to them is recorded in the Bible (Dent. 21, 23) but is really pre-biblical. In the absence of a clear ruling today on the basis of the law as to whether autopsy is permitted or prohibited, the difficulty is not so much the law, physicians will admit, as the primitive, instinctive revulsion to any act that keeps the dead from his eternal rest. The law will more easily hear the call of science than the masses who rule their lives by their intuitive responses."

Ginsberg of the Jewish Theological Seminary of America offers the following view<sup>5</sup>:

"About a century ago, because of the development in modern medicine, Jewish scholars began to discuss the question of autopsies and decided against them, which opinion is now considered authoritative by those who adhere strictly to Rabbinic law. Personally I am convinced that sooner or later, the rigor of the law will have to be essentially modified, and I hope that I shall find time in the near future to discuss this matter fully in a treatise. As long, however, as the old decision has not been reversed by men of learning and authority, I prefer to abide by it."

Spivak<sup>6</sup>, who has conducted an exhaustive and pioneer study of postmortem examinations among Jews, summarizes the views held by the Rabbis in the following manner:

"Autopsies are permitted when they are an honor to the deceased but prohibited when they are an indignity; they are permitted when a human life can be saved thereby but prohibited if conducted for purely experimental purposes, i. e., 'When the sick is not before our eyes.'"

#### COMMENT

From the review of the literature it seems justifiable to conclude that under no authority have necropsies been prohibited whenever good reason for their performance existed. In fact, the Talmud stipulates that if the examination may result in the saving of a human life, it is not only justifiable but desirable. With the failure to recognize the value of postmortem examinations prior to the 19th century, the discussions relating to necropsies were centered on purely sentimental reasons. Because of man's varying reactions, no definite ruling was laid down. Ginsberg's communication, though representative of the more conservative attitude, carries with it the suggestion that in view of the development of modern medicine the rigor of the Rabbinic law should be modified.

Even Landau's decision may be interpreted as favorable toward the performance of autopsies as suggested by Epstein. If that learned and most reverend Rabbi had foreseen the rapid methods of communication of today whereby scientific information obtained in one corner of the globe is swiftly transmitted throughout the universe, then his dictum "that the sick must be before our eyes" may be interpreted as a declaration that autopsies can and should be performed in all instances.

So far as the writer can determine, the Jewish laity is generally of the opinion that autopsies

are prohibited; hence the difficulty encountered in obtaining permission for postmortem examinations. It is conceivable that if the facts indicated above were brought to the attention of the Jewish people, a great deal of the opposition would thereby be eliminated. From the suggestions offered by the various living authorities on the subject it seems that if this question were formally brought up before a proper Jewish representative body, favorable action would result. The writer suggests that the Jewish press be solicited to cooperate in this phase of public service by granting space in its columns for the dissemination to the Jewish laity of information which will facilitate the breaking down of the present attitude against autopsies. The value and practicability of the press in social medicine has recently been emphasized by Phillips<sup>7</sup> and Saltzein<sup>8</sup>.

#### CONCLUSIONS

1. Jewish law does not prohibit postmortem examinations when a good reason exists for performing them.

2. In certain instances autopsies are not only justifiable but highly desirable.

3. There is a clear distinction made between autopsies and anatomical dissection.

4. In the light of modern methods of communication, an interpretation of Landau's decision by a recognized and authoritative Jewish body may reasonably be expected to legalize the performing of autopsies in all instances.

5. Dissemination of proper literature through the Anglo-Jewish and Jewish press will effectively contribute towards the breaking down of the existing attitude towards autopsies.

It is a pleasure to acknowledge the able and enthusiastic assistance rendered by Joseph G. Brin, LL.M., and Joseph Shubow, M.A., of the Jewish Advocate Publishing Company in the preparation of this manuscript.

#### BIBLIOGRAPHY

- 1 Christian, Henry A.: Selecting a Hospital for Internship. *J. A. M. A.*, 84:20, May 15, 1925.
- 2 Lauterbach, Jacob Z.: The Jewish Attitude Toward Autopsy. *The American Israelite*, Nov. 19, 1925; Cinn., O.
- 3 Zucrow, Solomon: Unpublished Treatise. Hebrew Teachers College, Boston, Mass.
- 4 Epstein, Rabbi Louis: Personal Communication. Boston, Mass.
- 5 Ginsberg, Louis: Personal Communication. The Jewish Theological Seminary of America.
- 6 Spivak, C. D.: Post-Mortem Examinations Among Jews. *N. Y. Med. Jour.*, 99:1185, June 13, 1914.
- 7 Phillips, Wendell C.: The Physician and the Patient of the Future. *J. A. M. A.*, 86:17, Apr. 24, 1926.
- 8 Saltzein, Harry B.: Practical Value of Newspaper Publicity in the Control of Cancer. *J. A. M. A.*, 87:5, July 31, 1926.

## AUTOPSIES UPON JEWS AND GENTILES

BY ELLIOTT P. JOSLIN, M.D.

So far as I know my father was the oldest patient in Boston and vicinity up to 1909 to have been successfully operated upon for disease of the stomach. He was not cured, but he lived happily for nearly two years and died the third year after operation at 77 years and 10 months of age. He believed that an autopsy

would be of value in the treatment of others and this proved to be the case and I feel sure that a considerable number of lives have been saved or prolonged by his decision. Today one would operate far earlier after the onset of symptoms.

When I found that the possible cause of death



in the case of my mother at 73 years of age began over 15 years before, and I now know it to have been preventable, I am thankful a post mortem examination was performed because it may spare suffering for some one else. So, too, with a Jewish woman who died of diabetic coma and hyperthyroidism. At the autopsy it was perfectly evident that she was not necessarily doomed to death, but that with a better knowledge of the use of insulin and of the prevention of coma in diabetes another similar life could be saved for her family.

It is difficult enough to attack and conquer a disease which has been investigated, but in the presence of those diseases which are little understood doctors are powerless.

During 28 years of the practice of medicine I have had but one autopsy upon a Jew.\* Of course I have taken care of thousands of Jews. Autopsies upon my patients have been of inestimable value to me during all these years and from these the Jew and Gentile have profited alike, but to this fund of information the Jews, save with one exception, have contributed nothing. This is not fair or just and I believe that if the purpose of an autopsy was properly understood the Jews would contribute as much to the progress of scientific medicine in this line of research as they have so notably contributed to all other branches. Jewish physicians should enlighten their patients on the benefits to themselves of the autopsy and its value in hastening advance in medical knowledge. They would do well to cite the article of Dr. Gottlieb in which he has convincingly shown that the Jewish law and religion put on ban upon a post mortem examination.

What is an autopsy? I look upon it as an operation, and as I am especially interested in diabetes, I naturally think of the frequency of operations upon diabetic patients. My statistics show that at least every third diabetic, and I believe every other diabetic, consults or should consult a surgeon before he dies, because of complications which a surgeon can relieve. If every other diabetic is operated upon before he dies, why should not every diabetic be operated upon after he dies? An operation during life is attended with pain and is for the benefit of the individual; an operation after death is without pain and for the good of humanity.

Old men and old women above all others are the ones who should demand that autopsies be performed upon them when they die. In dealing with old people, it is so easy to think that their troubles are due to their age, and to tell them so and cease to be aggressive in finding re-

lief for their real complaints. And the reverse is true, because illnesses which seem serious are neglected, when in reality they are curable. That is why a hospital for chronic disease should be as well equipped as a hospital for acute disease. The chronic patient needs acute treatment.

Any physician who knows that his method of treatment will be checked up by an autopsy will unwittingly take more pains with his patient. It is human nature to do better work when one is under supervision, if only his own supervision. Doctors make mistakes, but in general the doctors who have the most autopsies are the ones who err the least. It is insurance for the best sort of treatment during life to stipulate that an autopsy shall be performed after death.

Nurses should have their training include all that can be learned from autopsies. Pathologists should be paid sufficiently and their assistants well remunerated, so that no longer must physicians and surgeons take advantage of the desire of these scientific workers to seek the truth, when we want to know the truth. I am convinced we do not expend nearly enough money on autopsies and that if more were available for the improvement of the surroundings in which they were performed and for our friends, the pathologists who conduct them, they would be regarded more in their true light as exploratory operations. Therefore, I have no hesitation in asking that for the Beth Israel Hospital, for the New England Deaconess Hospital and for all other hospitals here in Boston or elsewhere financial support in dollars and cents be given specifically for autopsies.

Dr. Hyman Morrison has shown that here in Boston diabetes is two and a half times as frequent in the Jewish as in the Gentile population. For this reason the lack of Jewish participation in efforts to improve one's knowledge concerning this one disease and its treatment becomes all the more conspicuous and regrettable.

As a step forward in securing autopsies among Jews I believe that every Jewish doctor should arrange that a post mortem examination should be made upon himself at his death and that one should take especial pains in the families of Jewish physicians to secure permission for these examinations. These same suggestions I would make to Gentile doctors and their families. Only by means like these will prejudices be overcome.

\*Since this was written permission has been obtained for another.



## A LEUKEMOID BLOOD PICTURE IN SYPHILIS\*

BY RALPH C. LARRABEE, M.D., AND NATHAN SIDEL, M.D.

THIS case is reported because of the unusual blood picture and remarkable recovery when proper treatment was instituted. It emphasizes anew that syphilis may present bizarre forms.

## CASE REPORT: Hospital No. 500199.

J. G., 31, a white laborer, was admitted to the Boston City Hospital complaining of weakness. During the month previous to entry he had a mild cough, which became worse two weeks later, when he began to raise a cupful of purulent sputum daily. There had been increasing dyspnea with pallor during the present illness. No history of chills, fever or any blood loss.

The past history was negative except for marked deafness since 1906, apparently the result of chronic bilateral otitis media. He denied venereal disease both by name and symptoms. The family history was negative.

Physical examination showed a man in no apparent pain, conscious and markedly deaf. There was marked pallor of the skin and mucous membranes. The face showed a generalized brownish-yellow discoloration. There was no evidence of recent loss of weight. He seemed to take no interest in his surroundings and did not speak unless repeatedly questioned and vigorously motioned to.

The heart sounds were regular and of good quality, rate 110. No murmurs were heard. Over both lung bases posteriorly there was slight dullness with medium crepitant rales. The abdomen was flush with the costal margin, soft, and showed no signs of fluid; the liver and spleen were not felt.

The lower third of the right femur was definitely thicker than the left on palpation, and there was obvious thickening of both clavicles. Tenderness and redness were absent. There was no adenopathy. All the reflexes were normal.

On admission the blood was as follows: Hemoglobin 30 per cent (Sahli), red corpuscles 1,640,000, leucocytes 55,800, and platelets 282,000. The smear was characteristic of a severe secondary anemia; a differential leucocyte count showed 17 per cent lymphocytes and 9 per cent myelocytes.

The general appearance of the individual plus the blood picture made the diagnosis of myelogenous leukemia probable. The Wassermann, however, was found to be strongly positive, and the X-ray Department made the following report: "Marked thickening and irregular shafts, both femurs and clavicles. Skull shows multiple punched out areas in the outer table."

Because of this report syphilis, Paget's disease and metastatic carcinoma were considered. The general opinion of the various consultants favored the diagnosis of syphilis.

Recently Krumbhaar<sup>1</sup> published a series of ten cases whose blood pictures were indistinguishable from one or another of the various forms of leukemia. In cases with marked anemia, the tissue hyperplasia always includes the leucoblastic group, to a greater or less ex-

tent, as well as the erythroblastic element. In this series it is shown that acute infections may be so severe that myelocytes, or even myeloblasts, may appear in the blood as a result of the unusual strain upon the bone marrow.

In the case herein reported it was felt that the severe anemia and leucocyte picture might be caused by an unusual strain put upon the bone marrow by syphilis.

One week after entrance intensive intravenous sulpharsphenamin therapy was started. A few days after the first injection definite clinical improvement was noted. He received thirteen intravenous injections before his discharge. Clinical improvement was very rapid and on discharge, after seven weeks in the hospital, the patient appeared and felt perfectly well.

On admission, the hemoglobin (Sahli) was 30 per cent and the red corpuscles 1,640,000. These figures increased steadily during treatment; on discharge, the hemoglobin (Sahli) was 85 per cent and the red corpuscles 5,046,000.

On admission, the leucocytes were 55,800 with 9 per cent myelocytes. One week after sulpharsphenamin treatment was started the count was 7,000 with 1 per cent myelocytes. During the remainder of his stay the leucocytes remained around 7,000, with an increase in lymphocytes to 41 per cent. The blood smears, until the last two weeks in the hospital, were very characteristic of secondary anemia.

## SUMMARY

A case of syphilis with a leukemoid blood picture is presented. On admission it was considered as a probable myelogenous leukemia, but the X-ray and Wassermann reports led to the correct diagnosis. Intensive anti-luetic therapy was instituted and a brilliant recovery resulted. This report is additional evidence showing that a leukemoid blood picture does not necessarily mean true leukemia.

We wish to thank Drs. Robey and Palfrey of the Second Medical Service of the Boston City Hospital for the privilege of reporting this case.

## REFERENCE

- 1 Krumbhaar, E. B.: Leukemoid Blood Pictures in Various Clinical Conditions. *Am. Jour. Med. Sci.*, 1926, CLXXII, 619.

\*From the Blood Laboratory of the Boston City Hospital.

## A MEDICAL PROGRAM FOR PRIVATE ENTERPRISE AND COOPERATIVE COMMUNITY ORGANIZATION

BY HUGH PAYNE GREELEY, M.D.

IN these days of rapid changes in the practice and organization of medicine the medical profession is from time to time confronted with the proposal of State Medicine. Generally the idea is combated strenuously and it is shown most clearly that the results of any such step would be disastrous to individual initiative and to medical standards in general. Few gainsay that this would be the almost inevitable result of any such scheme. But, notwithstanding this, the fear that some radical legislature will attempt such a scheme remains as a constant bugaboo to many right thinking well-wishers of medical science and medical practice.

The real reason for this constantly recurring hobgoblin of State Medicine is that no sufficiently workable, constructive plan for doing away with the evils and shortcomings of medical practice has been proposed by the medical profession itself.

It would seem in the first instance that any scheme must preserve the element of competition, must maintain a state of practice where initiative will count, and must above all furnish the means whereby recent graduates of medicine can continue to grow and develop medically. Given the latter opportunity the element of competition as it now exists in small towns and some larger cities would not need to prevail; as it does not even now result in a tendency to raise standards but only to keep them where they are. The young men coming with fresh enthusiasm from school and hospital either cast aside much of their training by settling in small communities where the lack of facilities prevents their practicing medicine as they have been taught, or undertake specialism in a city practice. In either case only the very exceptional man continues to develop. The man in the country almost inevitably retrogresses. The city man having lost the most valuable asset, a general practice, never can be quite the man that he should have been. The loss of perspective due to a man's going too soon into a restricted practice is tragically evident in most specialists. The average exemplar of any one of the surgical specialties has a prismatic brain. Every ray of intelligence that enters comes out bent. And then comes the increasing group of medical specialists who while yet internes or even undergraduates become cardiologists, gastro-enterologists or metabolism experts; men who practice medicine by electrocardiogram, by x-ray, or by the hydrogen ion concentration of body fluids. A physician must be broadly trained.

All educators and organizers in the field of

medical practice are stressing more and more the fact that the future successful practitioner must be a health specialist and must practice preventive medicine. This idea partly emanates from the fear that if all preventive measures are taken over by organized health departments, treatment of disease will soon be added on. Thus again rises the goblin of State Medicine.

The evils and shortcomings of medical practice today are:

Neglect of preventive medicine and education by the practitioner; failure of good men to settle in sparsely settled communities; over specialization and clinic organization in cities; inability of people of moderate means to get good medicine for a reasonable figure; and inability of the younger men to practice medicine as they have been taught. In the schools and hospitals they were taught to use instruments of precision to the neglect of their native talents, and so without a complete hospital equipment they are at a loss to practice good medicine.

Among the many plans suggested for the relief of these evils have been the establishment of diagnostic centres, community hospitals, county units, or what ever you may wish to call them. The proper financing of these undertakings is always the big problem.

Along the same line are the well established and well known health organizations of our large colleges. For a great many years they have efficiently taken care of the health of students, and their means of support has been a combination of a capital expenditure on the part of the institution for buildings and equipment and a yearly levy of five-dollars or so taken from the tuition. By such a levy a considerable fund (\$25,000 to \$35,000) in our larger colleges is available for salaries and other running expenses. Of course, in a large body of healthy young people the morbidity is relatively less than among a mixed population, but the annual occurrence of minor epidemics may partly balance this otherwise lessened morbidity. The fact remains that the whole success of the plan depends upon coöperation. The well take care of the sick by pooling their subscriptions. The sick always receive many times over their money's worth and the well do not feel the burden. On the contrary they feel a just pride in helping support at so little personal sacrifice an organization that ministers to the health of the community in which they live, fulfilling as it does the functions of a department of preventive medicine, a hospital, and an outpatient clinic.

Why should not this type of organization be

duplicated many times over outside of educational institutions? Any community not provided with adequate medical facilities that could enroll one-thousand members in a coöperative undertaking of this kind could go a long way toward getting up-to-date medical service for all at a low figure, and it would furnish a great encouragement to any young men contemplating general work outside a large city. For that matter, there might well be more than one or several such organizations in healthy competition in our larger cities.

The insurance companies are enlarging their field continually, trying hard not to tread on the toes of the medical profession but secretly knowing ways in which some such schemes as the above would better conditions for their policy holders and the general public.

The whole scheme of educational propaganda of the insurance companies and other organizations urging annual physical examinations will never "carry through" until the defects and incipient ailments which their examinations uncover are taken care of by the company's experts. The whole weakness of all these organizations is that no provision is made for the *treatment*. The general recommendation—"Go to your family physician"—is merely side-stepping a responsibility in an effort to keep the good will of the general practitioner. At times even now the practitioner is somewhat jealous because of this predatory invasion of his territory, often making light of the diagnoses; and as a consequence nothing is done. At other times he is not even consulted, the examinee preferring to take a chance. Then again the general practitioner may welcome the examination and try to get the patient to undergo the necessary treatment.

In a coöperative health organization the same men who make the examination carry the work forward to a logical conclusion and treat the patient. There is no loss of continuity in the service.

The complete service of such an organization if outlined would consist of three branches—

1. Public Health Service, divided into education service, preventive medicine, school and preschool hygiene work and immunization, the collection of vital statistics through health surveys, and well kept records.

2. Individual health service, annual examination, treatment of disease in out-patient clinic and in the home.

3. Hospital Services, Obstetrics, Surgery, Medicine, and minor specialties.

The size of the organization would depend solely on the size of the community and the number of subscribers.

The ideal would be to give to all subscribers the same service, but no doubt for practical rea-

sons there would have to be a graded service, some taking the Public Health service only, some taking private individual service, and some taking all three or any two.

The details as to the actual cost for each service would be calculable on the basis of experience and morbidity statistics. It could be as mathematical as life insurance.

As a concrete example let us take 100 people for the complete service—at \$75.00 a year giving a total of \$7,500, another 300 at \$50.00 a year giving \$15,000, and 500 at \$25.00 a year giving \$12,500; a total budget of \$35,000 and 900 subscribers. In order to make the concern more successful the subscribers could be nearly doubled, as the same staff could take care of 1,800 patients as easily as they could take care of 900. Three physicians could do the work, and at \$8,000 apiece there would be \$11,000 for running expenses for the educational work, the clinic building, laboratory and supplies, and clinical help.

The hospital could be a community coöperative affair or a privately given memorial. If given outright with a sum to help in maintenance the scheme would be better started and better continued.

This scheme would maintain practically all of the advantages of general practice, would give to all (country and city) cheap and progressive forward looking medicine and would ensure the upholding of medical standards. It would, in addition, furnish a training ground for future practitioners in the form of assistantships which would be unrivalled in the country. Instead of furnishing the one-sided training in a hospital (the only kind now available) it would combine the old apprentice method with the modern hospital method and train the future practitioner in the hospital, in the clinic, in the school and in the home.

This would be by no means the least important service to humanity.

The details of the management of an organization of this kind with the specific items of service rendered could be made as comprehensive as one pleased or could be somewhat restricted. Educational work might include lectures, bulletins, work incorporated in the school curricula such as studies in heredity, transmission of disease, physiology, cancer, goitre, tuberculosis, etc.; preventive work in goitre, vaccination for small pox; diphtheria, typhoid, whooping cough and scarlet fever susceptibility; nose, throat and mouth hygiene.

Individual health work would include the annual physical examination with advice as to the correction of any trouble and the carrying through of the program of correction; visits to the clinic for minor ailments and visits to the house for more serious ones. The number of

these visits would have to be limited perhaps or determined by the type of service subscribed for. Persons in the community who upon application for membership were found to have chronic disease could not come in under the same terms, which would be determined upon for those who passed the first examination. Those coming down with chronic disease would get all the benefit of constant supervision. Persons who wanted to enter just in order to get service for some known condition like pregnancy, hernia operation, etc., would soon wreck the organization. Memberships could be taken out perhaps only for two or three year periods with a refund if for any reason families removed from the town or memberships could be taken out at graduated rates for those already afflicted.

People taken sick in other towns could receive treatment in those towns by reciprocal agreement or could draw a cash dividend to help take care of them. This might create a different type of service at a somewhat advanced rate. The whole basis of fees would be determined by an actuarial bureau. At first the fees would have to be sufficient to cover all contingencies, later dividends could be declared or the rates reduced for subsequent years.

Hospital service would include the services of the physician but hospital charges would be extra until such a time as the funds developed to a point where they would take care of it unless the original endowment was sufficient.

If a foundation fund could start a thing like this going and then gradually drop out, the idea would, I believe, take hold as a permanent form of medical service exactly comparable to life insurance.

If the insurance companies could enlarge their field to include this in districts now poorly supplied or not supplied with medical aid the experiment would, I am sure, be worth more than it cost.

This may be Utopian but I see no reason why a community could not organize on these lines. A town of 10,000 or so would have to convince only 1000 to adopt it. The experience of college men and women might help put the idea across in the community outside or beyond the University.

The faculty in many institutions have reaped the value of such an organization even more than the students and I am sure would feel like doing more to get better and more comprehensive service.

## ANOMALY OF BILE DUCTS

BY IRVING J. WALKER, M.D., F.A.C.S.

BECAUSE of the increasing number of operations upon the biliary system, it behooves the surgeon more than ever to recognize and report abnormalities of this tract. This information will add to the refinements of operative technique, which in turn will be reflected in lowering the mortality, especially in operations upon the hepatic and common ducts. Careful exposure of the biliary ducts will undoubtedly reveal an increasing number of these abnormalities.

### CASE REPORT

Male—Age 52.

C. C. Jaundice with abdominal pain.

F. H. Irrelevant.

P. H. Irrelevant.

P. I. For one year has had "indigestion." Two years ago had an attack of epigastric pain. This was followed by jaundice lasting three days. One year ago had another attack of jaundice but with no pain. From that time up to the present (June 20, 1925) has felt well except for indigestion. On this date he was again seized with severe epigastric pain which lasted eight hours. Jaundice appeared about twelve hours after the onset of pain. There was no vomiting. He did have a marked chill. The jaundice was intermittent up to the time of operation, July 15, 1925.

At operation nothing abnormal was found outside the biliary tract other than chronic pancreatitis, as shown by enlargement and thickening of the head of the pancreas.

The biliary tract showed the following:

The gall-bladder was found firmly contracted about a single stone, oval in shape, 4 cm. long and  $2\frac{1}{2}$  cm. wide. What was considered to be the common duct was exposed with some difficulty because of adhesions. On opening this, no stone could be found. A probe could be passed downward into the duodenum. When turned upward, the probe entered the gall-bladder. The latter was then opened and the stone removed. The probe then showed a clear passage from the gall-bladder into the duodenum. Exploration of the gall-bladder revealed another opening, through which a probe could be passed upward toward the liver. Further dissection and identification of the ducts revealed the hepatic duct leading directly into the gall-bladder, and another duct leading from the gall-bladder into the duodenum. Careful search showed no duct running between the hepatic duct and the common duct. As shown by the diagram, all the bile from the liver passed through the gall-bladder on its way to the intestine.

The opening which had been made in the duct was closed and cholecystostomy done. The drainage tube came out on the eighth day. Bile drained from the wound for nine days more, when the sinus closed. There have been no subsequent symptoms of biliary tract disease.

In mammals, as a rule, the hepatic ducts unite into one trunk, which joins the cystic duct to form the common duct.

The arrangement of ducts described in the case reported, while abnormal in man, is normal among some of the lower vertebrates. Thus, Owen states that in Wolf Fish, *Lepidosiren*, *Siren*,

and Amphiuma, the bile is sometimes conveyed to the gall-bladder by the hepatic ducts, then directly by the cystic duct to the beginning of the intestines.

There would seem to be a possibility for discussion as to the appropriate term to apply to this duct that leads from the gall-bladder to the intestine. It is termed the cystic duct by both Owen and Schachner. It is accepted that in Mammalia the ducts are named as denoting the kind of bile they carry. Thus, the hepatic

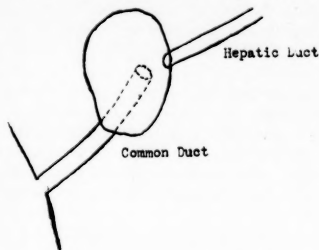


Diagram showing arrangement of ducts

duct carries liver bile, the cystic duct carries gall-bladder bile, and the common duct carries both the hepatic and the cystic bile.

Therefore in the arrangement of the ducts in the case reported, the duct which leads from the liver to the gall-bladder would be termed the hepatic ducts, and that which leads from the gall-bladder to the intestine would be called the hepato-cystic or common bile duct.

Kehr describes this same arrangement of ducts as a possible anomaly.

Schachner reports a case which corresponds fairly well to the one herein reported:

"The excretory apparatus of the liver is here

so arranged that the whole of the bile must have passed through the gall-bladder on its way to the intestine. The gall-bladder itself is much smaller than usual. When laid open it measures two inches in length, and rather less in breadth. It would hold about two drachms of fluid. In its upper or attached wall, there are two openings; the larger one near the center is the orifice of the principal hepatic duct, the smaller one nearer the fundus is the orifice of a cysto-hepatic duct. The large ducts of the left lobe pass across the longitudinal and transverse fissures where they become superficial, and join the principal duct of the right lobe shortly before it opens into the gall-bladder.

The cystic duct which appears to be the sole channel of communication between the liver and duodenum is, at its commencement, constricted so as to admit nothing larger than a probe, but immediately dilates considerably."

Schachner has extensively reviewed the literature relating to anomalies of the gall-bladder and bile passages. He classifies anomalies of the bile ducts as follows:

- (1) Double cystic duct.
- (2) Anomalies of hepatic ducts.
- (3) Absence of common ducts.
- (4) Anomalies of common duct.

In this classification, no allowance has been made for anomalies of the cystic duct, other than double cystic ducts. In view of the case reported in this paper, it would seem that a slight change in this classification, namely, from (1) Double cystic ducts, to (1) Anomalies of cystic ducts, would be justified.

#### BIBLIOGRAPHY

- Kehr: Die Praxis der Gallenwege Chirurgie, Bd. 1 und 11.  
Owen: Comparative Anatomy and Physiology of Vertebrates, Vol. 1, pp. 427 and 451.  
Schachner: Anomalies of the Gall-Bladder and Bile-Passages. Ann. Surg., Vol XXXVII, No. 5, p. 429.

## MEDICAL PROGRESS

### PROGRESS IN GASTRO-ENTEROLOGY FOR 1926

BY A. E. AUSTIN, M.D.

THE attention of investigators has been directed largely to the cause and better diagnosis of gastric and duodenal ulcers, the significance of bilirubinemia, new methods of treatment of these conditions, and rigid review of former proposed methods of treatment and diagnosis.

#### DIAGNOSIS OF GASTRO-DUODENAL ULCER

Barsony<sup>1</sup>, on the basis of an extensive experience in the Budapest clinic, combats the general view that both gastric and duodenal ulcers are accompanied by hypersecretion. He declares that in only a few gastric ulcers is hyperacidity present, and since in so many other conditions the acid values are increased, the examination of gastric contents in suspected cases of ulcer is

wholly superfluous. While in duodenal ulcers, hypersecretion is the rule, yet in cases of deformed duodenal bulb due to adhesions, as shown by the radiogram, we may have either hypo or hyperacidity, so that increased acid values of gastric contents do not help us in diagnosis. As a means of differentiating between cancer and ulcer of the stomach, the calculation of the acids often leaves us in the lurch since, in the former, the presence of free hydrochloric acid is maintained for a long time after onset of disease. He further claims that the absence of free hydrochloric acid in the presence of a gastroenterostomy is no guarantee against the subsequent recurrence of another gastric or duodenal ulcer or a post operative jejunal ulcer.



His conclusion is that the employment of the test breakfast and subsequent expression of the gastric contents is of little value in the diagnosis of suspected ulcer.

Tiefensee<sup>2</sup> used the diluted alcoholic or caffeine solution for an incitor of gastric juice, and the Rehfuess tube, on 67 cases of uncomplicated gastric hypersecretion, 48 cases of duodenal ulcer, and 22 normal individuals. The removals were first made 30 minutes after the draught was taken, and then every 20 minutes as long as gastric juice was found. The normals showed nothing new. Those which showed absence of free hydrochloric acid by the single removal of gastric contents, after the test breakfast, often proved to be normal or even hyperacid by the fractional removal. The only true achylia seemed to be the victim of gastric cancer, and that was not invariable, in that cancer patients occasionally had free acid; the sufferer from pernicious anemia and those very rare cases in which the absence of gastric juice was congenital.

The most valuable results were the distinct variations in the curves representing the amount of gastric juice in simple hypersecretion and that accompanying duodenal ulcer. In the former, the rise is rapid, reaching a maximum at the end of the first hour, rarely extending to the third half hour, while in duodenal ulcer, there is a primary maximum reached between 30 and 50 minutes, a recession, and a second maximum at the end of two hours. The author thinks that this variation, taken of course with the other factors of physical examination, is of value in separating functional hypersecretion from that accompanying duodenal ulcer.

Kalisch<sup>3</sup> has subjected the methods of Boas of producing occult blood in the stool of patients suspected of ulcer of the stomach or intestinal tract in whom none has been previously found, by applying hot applications to the abdomen, to review. Eight patients were chosen whose clinical diagnosis was ulcer of the stomach or duodenum, and in some of whom the Roentgenogram showed evidence of ulcer, but in whom after 14 days observation, no occult blood was found in the stool. The hot applications were made with Cataplasma Kaolini, and on the second to the fifth day, five of the eight showed marked occult blood in the stool. The employment of the applications to the abdomen, thinks the author, causes hyperemia of the gastro-intestinal tract and thereby encourages bleeding from the ulcer which had previously been quiescent.

#### LIVER AND GALL-BLADDER DISEASES

Scherk<sup>4</sup> investigated 30 cases of gastric and duodenal ulcers with reference to the amount of bilirubin found in the blood. These diagnoses were assured by clinical history, laboratory tests, and radiological examination. The examination of the blood was made during acute ex-

acerbations of the ulcer, and of the 30, twelve were found to have a distinct and emphatic bilirubinemia. For contrast, 30 cases of proven cholecystitis and cholelithiasis were taken, and while all had an increased bilirubin content in the serum, in ten, the increase was no greater than was found in peptic ulcer.

His conclusion is, that when diagnosis is doubtful between cholecystitis and duodenal or gastric ulcer, the amount of serum bilirubin can be used only with the greatest caution in deciding this question.

Hatzieganu<sup>5</sup> has made a careful study of chronic hepatitis in seven cases and tries to differentiate this condition from cholecystitis and the cirrhoses. His cases began gradually with loss of appetite, nausea, vomiting, dull epigastric pain, and a slight rise of temperature and subicteric coloration which reaches its greatest intensity at the end of 3 to 4 weeks. The causes usually found were arthritis, influenza, appendicitis, and pyorrhoea, though in some cases no source of infection could be discovered. Physical examination always showed an enlargement of the liver to several fingers' breadth below the costal border. The temperature usually remains above normal (37.5 to 39.5) with many remissions when it reaches normal or may even become subnormal. The disease reaches its maximum in 2 to 3 months and may continue from 6 months to 5 years. The jaundice becomes more and more intense; emaciation ensues of the most extreme character; diarrhoea of pancreatic origin may occur, or ascites complete the syndrome. The blood always shows an anemia with marked leucocytosis. Of these cases, 5 died, 3 of them from what the author calls hepatic insufficiency.

Pibram<sup>6</sup>, to avoid the intravenous use of tetrabromin and tetra-iodin-phenolphthalein, as well as the vomiting and diarrhoea accompanying their oral use, has sought a new substance among those known to be eliminated through the gall-bladder, and found it in cinchoninic acid or atophan or cinchophen, as it is also known. This, treated with iodine gives us an iodine-atophan as it is called which as proved by appended cystograms gives us a picture of the gall-bladder with marked clearness of outline. His method of administration is as follows; five to six grams of the substance is boiled with a cup of milk and to this a level teaspoon of cocoa is added, the whole well mixed, and then two coffee spoonfuls of sugar are added. As the mixture causes a temporary irritation of the throat, a cookie or cracker may be eaten with it or the drug, a yellow powder, may be given in capsules. This is taken in the evening with a light meal and from 14 to 20 hours after its ingestion is the most favorable time for the Roentgenological examination of the gall-bladder. The drug is made by Schering & Co.

Barsony and Koppenstein<sup>7</sup>, basing their view

upon cholecystograms, attack the theory that deep inspiration tends to empty the gall-bladder. The patients were examined 12 to 13 hours after taking the contrast material and the size of the gall-bladder noted on the cholecystogram. Then the patients were requested while lying on their backs to come to a sitting posture, bending as far forward as possible, and to continue these exercises until exhausted, this naturally producing deep and rapid respiration after which the patients were seated. 3 to 4 hours after the first examination, a second plate was made and the two compared. The gall-bladder shadow of the later plates was sometimes larger and sometimes smaller than the first one taken, but practically, no constant difference was discovered. Even when vomiting was produced by intravenous administration, the gall-bladder shadow was unimpaired by the pressure of the diaphragm in the act of emesis.

The conclusion of the authors is that pressure of the abdomen does not hasten the emptying of the gall-bladder, and the injunction of many workers in this line, that the patient should not be allowed to sit during the examination of the gall-bladder by the X-ray is untenable.

Edelmann<sup>8</sup> describes a new affection of the liver in which the bile pigments seem to play no part. Occurring chiefly in men from 35 to 55 years of age, it causes many of the symptoms of liver disease, but particularly pain in the joints and a peculiar coloring of the skin resembling that of pernicious anemia, but never of the sclerae which distinguishes it from ordinary icterus. The blood, too, shows increased amounts of cholesterolin, but not of bilirubin, another distinguishing point from ordinary hepatic diseases. The liver is usually enlarged and somewhat tender, but the spleen is normal. Sixteen such cases have been observed by the author who is convinced that this group of symptoms and objective findings comprise an entity in disease.

#### DUODENAL CONTENTS AND THEIR SIGNIFICANCE

Landau<sup>9</sup> and his coworkers, with the aid of the duodenal tube have attempted on eight patients with gastric achylia to determine the relation between this condition and pancreatic achylia. The results are in general that no relation exists between these two conditions, that is; gastric achylia may exist in an individual who has a normally active pancreatic juice, and on the contrary, a normal gastric juice may accompany a pancreatic achylia. In all the cases studied, the association of gastric and duodenal achylia accompanied pernicious anemia, and while the authors are not willing to make a dogmatic statement in regard to the constant association of pancreatic achylia and pernicious anemia, they seem to be closely related to each other.

Autie<sup>10</sup> discusses the difficulty of the diagnosis of cancer of the pancreas and shows the value

of the examination of the duodenal contents. Magnesium sulphate of 30% strength was used to incite the activity of the pancreas and usually 75 C.C. of duodenal contents were aspirated for the tests. It was found that the presence of trypsin or amyllopsin was of little value because they could come from the mouth or the stomach, but the presence of lipase was of the greatest importance. In the two cases studied by this method and found at autopsy to be respectively cancer of the head and body of the pancreas, the detection of lipase in the duodenal contents of the latter shows that this test has little value when the body of the organ is involved, but its absence in cancer of the head of the pancreas can be utilized when other means of diagnosis fail.

Kuttner and Loewenberg<sup>11</sup> have made numerous bacteriological examinations of the duodenal contents obtained by the duodenal tube, and have reached the following conclusions:

(1) When the stomach and duodenum are in a healthy condition, no bacteria are found in such contents or possible at times a scanty growth.

(2) In simple anacid gastritis, in a part of the cases, pathological bacteria are found in the duodenal contents, either cocci (more numerous) or colon bacilli.

(3) These were invariably found in pernicious anemia and did not cease during intermissions of the disease.

(4) In inflammatory conditions of the bile duct, pathological bacterial growths are found in the duodenal contents, and they were not modified by the acidity of the gastric juice.

Chronic inflammation of the biliary tract is attributed to the entrance of bacteria from the duodenum. Furthermore, in 55 cases of cholecystitis, 19 showed complete suppression of the hydrochloric acid in the stomach, thus favoring the more ready entrance of the bacteria into the biliary tract. In pancreatitis also, the frequent discovery of colon bacilli and streptococci in the duodenal contents indicate an invasion of this organ by the growths.

#### CAUSATION OF GASTRIC ULCERS

Balint<sup>12</sup> first tested the blood of 22 sufferers from gastric ulcer and found in 40% the alkalinity of the blood below the lowest normal border. In 19% it was under the normal average, and in only 11% did the blood reach the normal alkalinity; then 20 C.C. of an 8% solution of sodium carbonate were injected into the patient intravenously. The urine was collected 2 hours afterward, being sure that the bladder was empty at the time of the injection. Ten normal individuals used for control showed prompt alkalisation of the urine; contrarily, 10 of the ulcer cases showed acidity of the urine, and 12 barely reached a neutral urine. Then tests of a

similar character were made on patients taking a Sippey diet, and while normal individuals showed a constant alkaline urine, the ulcer patients showed a prompt return to an acid urine when the alkali was taken away during the night.

His conclusion is that the tissues of the body being always less alkaline than the blood on account of the  $\text{CO}_2$ , have their alkaline reserve so depleted that those of the stomach fall prey to the active gastric juice; hence, the Sippey treatment does not heal the ulcer by neutralizing the gastric juice, but by increasing the alkaline reserve of the tissues.

Scherk<sup>13</sup> gave 50 grams of glucose to fasting persons and made four examinations for blood sugar, one before the sugar was taken, one a half hour after, the third, one hour, and the fourth, 2 hours after the sugar was taken. It was found that the blood sugar of normal individuals after a temporary increase has descended to the normal level in 2 hours. In gastric and duodenal ulcer (19 cases), the sugar curve followed the law of normal individuals. In cancer of the digestive tract (16 cases), however, thirteen failed to show a return to the normal sugar level. His conclusions are:

(1) All cancers, and especially those of the digestive tract, cause in the possessor a distinctly delayed sugar elimination from the blood after glucose ingestion.

(2) An absence of delayed elimination does not prove positively that the patient has not cancer.

(3) Only the positive results of the test can be used for diagnosis.

(4) The sugar curve in gastric and duodenal ulcers follows that of the normal individual.

Wilkie<sup>14</sup> points out in certain cases in which gastro-enterostomy fails to relieve the symptoms of duodenal ulcer, that a gastric ulcer is often coexistent unless careful search is made, and this causes a continuation of the symptoms. In an examination of 490 bodies at autopsy, 41 were found in which were one or more duodenal ulcers, and 5 of these 41 had also one or more gastric ulcers, that is; in 12% of the duodenal ulcers there were coincident ulcers of the stomach. In 300 operations for ulcer, Wilkie has made careful search for coincident duodenal and gastric ulcers, and his results are as follows: (1) Duodenal ulcers alone, 167 males, 54 females. (2) Gastric ulcers alone, 27 males and 15 females. (3) Coincident duodenal and gastric ulcers, 27 males and 15 females. The author's recommendations are, that in active coincident ulcers in persons under 50 years with little or no retention, the ulcers be burned out with cautery and infolded with a gastro-enterostomy for safety against a stenosis. In chronic ulcers in elderly people (over 50) having considerable retention, it is much more advisable to do a simple

gastro-enterostomy which will give relief and is much less dangerous to life.

Noelker<sup>15</sup> calls attention to the sources of error in Roentgenological diagnosis of duodenal ulcer. This is due to the three varieties of these ulcers as shown by autopsy, and consisting of: (1) the fresh ulcer of the mucous membrane; (2) callous perforating ulcers, and (3), scar tissue produced by repeated healing of the ulcer. The three most characteristic appearances of the ulcer before the fluoroscope are (1) the pocket which often appears in the bulb; (2) the persistent contraction which appears in the bulb when the rest of the duodenum is filled and fully distended, and (3) the so-called torn bulb which shows irregular filling with the appearance of holes in the bulb. A description of the technique follows which is rather too complicated for a non radiologist.

A résumé of 1000 cases in the clinic shows 350 normal patients, 158 with ptosis, 153 with duodenal ulcer (123 men and 30 women); 172 with pyloric ulcer (128 men and 40 women); 25 with cancer of the stomach (14 men and 11 women); 86 with adhesions about the bulbous duodeni (10 men and 76 women). Twenty per cent of these patients were operated upon. The diagnosis of the gastric condition was confirmed in practically all of the patients. Of the duodenal ulcers (8% of the total) there were several errors found on opening the abdomen, in other words, no ulcer was found on operation though shown by X-ray. These false appearances of ulcer were produced by (1) epigastric hernia; (2) old pleuritis with extensive adhesions below the diaphragm, and (3) adhesions to the gall-bladder. In conclusion, the author states that in spite of errors, the X-ray proves the most reliable method of diagnosing duodenal ulcer, far exceeding other clinical methods.

Muehsam and Unger<sup>16</sup> report on 123 cases of perforated peptic ulcer, 116 of whom were operated, the others being moribund on entering the hospital. Of these, 18 were women and 98 men. There were 19 cases falsely diagnosed as appendicitis, and the true condition was discovered only upon opening the abdomen. Four methods of operation were performed according to the conditions found; (1) sewing up the perforation with or without implantation of a piece of mesentery; (2) sewing up the perforation accompanied by gastro-enterostomy; (3) the introduction of a drainage tube sewing the mesentery around it, and (4) resection of the ulcer. The authors emphasize the time after the catastrophe rather than either of these methods, though urging that method requiring the least time. If operated within 6 hours after the perforation, only 20% died; if deferred to 24 hours after, 66% died, and beyond this period, all died. The authors place great stress on irrigation of the peritoneal cavity with physiological salt solu-

tion until the fluid leaves the cavity clear while a residue of the fluid left there seems to aid recovery in overcoming shock. The site of the ulcer, whether duodenal, greater or lesser curvature of the stomach, or near the cardiac portion seems to make but little difference in the prognosis. The commonest cause of death is peritonitis, and second to this stands lung abscess.

Iwanow<sup>17</sup> by the continuous aspiration of the contents of the fasting stomach at the interval of 5 minutes, found that the periodic return of the duodenal contents through the pylorus into the stomach was a physiological process in 3 healthy individuals investigated, and the variations were no greater than those of pulse or temperature of different persons. Furthermore, he found that the recovery of supposed duodenal contents containing alkali, trypsin, and bile, was no proof that the sound was actually in the duodenum. It was further found that in every case of ulcer of the stomach accompanied by hypersecretion, there was no regurgitation of duodenal contents. As the bile shows a marked antagonism to the action of pepsin and hydrochloric acid, the author suggests that the absence of regurgitation may prove a strong factor in the causation of gastric ulcer. In certain cases of gastric cancer, hepatic diseases, and gastric achylia, there seems to be a constant reflux of duodenal contents into the stomach without interruption. The duodenal content found in the fasting stomach, too, is much weaker than that drawn directly from the duodenum and can only be used with reservations to determine the integrity of the pancreas.

Alkan<sup>18</sup> calls attention to the frequency of symptoms of tetany associated with gastric diseases. Formerly this tetany was supposed to be associated only with gastric dilatation with large food residue, but the author collected 21 cases of reported tetany and found 10 of them had digestive disturbances of a spastic and hypersecretive nature, while three had positive evidence of ulcer of the stomach. Hence, he concludes that the tetanic spasm of the muscles of the stomach may interfere with circulation and cause ulcer. Based upon this theory, the author made a careful study of 8 cases of spastic affection of the stomach accompanied by hypersecretion; 14 cases with ulcer symptoms, and 1 actual ulcer case with hematemesis. All of these had some reactions of tetany (reflexes), and based upon the well known occurrence of tetany after the removal of the parathyroid, he suspected a faulty parathyroid secretion and treated them all with bland diet and injections of paraglandol (a preparation of parathyroid). Detailed histories are given, but the general import of these is that improvement was much more rapid than by treatment by any other method, and there have been no recurrences though the period since treatment has been short (2 yrs.).

## TREATMENT OF GASTRIC HYPERACIDITY

Steinitz and Sternfeld<sup>19</sup>, by use of fractional evacuation of gastric contents, strove to learn what effect fat has upon secretion and motility of the stomach. Milk was used with different percentages of fat in equal amounts so that the casein would not affect the results. One milk had 2-3% of fat, while the other had 12-15% of the same. The same patients were given the normal milk, and two days later, the fat milk.

The conclusions of the authors from their experiments are: (1) The arrival of free hydrochloric acid is delayed, its rise hindered, and in half of the cases there is a distinct reduction of the amount of acid secreted when the fat milk is given; (2) The motility of the stomach was in no way influenced by the fat; (3) The reduction of the acid values was in no way brought about by the reflux of duodenal juice into the stomach; (4) The typical changes found in the acidity curves are due to the restriction of acid secretion by the fat.

## REFERENCES

- 1 Barsony, Theodor: Magen-Duodenal Geschuer und Probenfruchtstueck. Wien. klin. Wochenschr., 39, 157, Feb., 1926.
- 2 Tiefensee, Kurt: Die fractionierte Magen- und Duodenal-entleerung als differential-diagnostische Hilfsmittel. Muench. med. Wochenschr., 73, 1401, Aug., 1926.
- 3 Kallisch, Hans: Zur Frage der provokatorischen Erzeugung okkultur Blutungen (nach Boas). Deutsch. med. Wochenschr., 42, 1776, Oct., 1926.
- 4 Scherk, G.: Bedeutung des Bilirubinspiegels im Hlut bei Magen- und Gallenblasesaffektionen. Archiv. f. Verdauungskr., 37, 344, 1926.
- 5 Hatzigianu, J.: Sur l'hepatite septique lente. Archives des Maladies de l'appareil Digestif et des Maladies de la Nutrition, 16, 787, July, 1926.
- 6 Pilbram, B. O.: Ueber ein neues Kontrastmittel zur roentgenologischen Darstellung der Gallenblase. Deutsch. med. Wochenschr., 33, 1291, July, 1926.
- 7 Barsony, Theodor, und Koppstein, Ernest: Wird die Gallenblase durch Bauchpresse entleert? Muench. med. Wochenschr., 73, 1478, Sept., 1926.
- 8 Edelmann, Adolf: Ueber eine eigenartige Leberaffektion mit Cholesteramie. Wien. klin. Wochenschr., 43, 1245, Oct., 1926.
- 9 Landau, A., Cygielsstreich, J., und Fejgin, M. Achylie: Gastro-Pancreatite. Archives des Maladies de l'appareil Digestif, 6, 409, Apr., 1926.
- 10 Autic, D.: Duodenaltubage in der Diagnostik des Pankreas-krebes. Arch. f. Verdauungskr., 33, 62, Oct., 1926.
- 11 Kuttner, L., und Loewenberg, W.: Die Bedeutung der bakteriologischen Untersuchung des Duodenalsaftes fuer die Klinik der Abdominalerkrankungen. Med. Klin., 37, 1398, Sept., 1926.
- 12 Balint, Rudolf: Untersuchungen ueber die Pathogenese des Ulcus ventriculi. Wien. klin. Wochenschr., 39, 1, Jan., 1926.
- 13 Scherk, Gerhard: Ueber die diagnostische Bedeutung von Blutzuckerkurven nach Glukosebelastung beim Ulcus pepticum und Carcinom. Klin. Wochenschr., 32, 1459, Aug., 1926.
- 14 Wilkie, D. P. D.: Duodenal and Gastric Ulcers. Brit. Med. Jour., 3427, 469, Sept., 1926.
- 15 Noelker, Wilhelm: Die Roentgendagnostik des Ulkus Duodeni unter beson der Beruecksichtigung der direkten Symptome und Schilderung der im staedischen Roentgeninstitut gehandhabten Untersuchungstechnik. Klin. Wochenschr., 5, 1914, Oct., 1926.
- 16 Muchsam und Unger, E.: Ueber das perforierte Magen- und Duodenalgeweser. Archiv. f. Verdauungskr., 37, 149, 1926.
- 17 Iwanow, W.: Ueber die Regurgitation des Duodenalinhalt in den nuchternen Magen. Archiv. f. Verdauungskr., 33, 223, 1926.
- 18 Alkan, L.: Endokrine Faktoren in der Genese und Therapie des Ulkus ventriculi. Archiv. f. Verdauungskr., 33, 55, 1926.
- 19 Steinitz, H., und Sternfeld, M.: Zur Fettbehandlung der Hyperaciditaet. Archiv. f. Verdauungskr., 39, 50, Oct., 1926.



**Case Records  
of the  
Massachusetts General Hospital**

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN  
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY R. C. CABOT, M.D.  
F. M. PAINTER, A.B., ASSISTANT EDITOR

**CASE 13181**

**EPIGASTRIC PAIN RELIEVED BY SODIC  
BICARBONATE**

**MEDICAL DEPARTMENT**

An American machinist sixty-one years old entered the hospital for the first time January 15 complaining of sore distressing pain in the "stomach."

Beginning six months before admission the patient had occasional intermittent epigastric discomfort, especially after meals, localized to one small spot just below his sternum. When it became constant he was aware of a considerable increase in gaseous eructations and of a sour taste in his mouth. The discomfort was aggravated half an hour after eating and was relieved by the belching of gas and by soda. For two months he had much more gas than previously. He had irritating cough, hoarseness, and a pain in the right side of the chest on deep inspiration or on lying on the right side. These with the epigastric pain disturbed his sleep. For five weeks the sensation had been painful. It did not radiate, although he had an occasional darting twinge in the upper abdomen. For a month he had not been well enough to work. For three weeks the discomfort and pain had been generalized throughout his upper abdomen down to the level of the umbilicus. He had felt increasingly exhausted. Two weeks before admission a physician found on palpation a very painful spot and also discovered a hernia. The present symptoms were aggravated by eating and relieved by soda. During the past six months he had lost 14 pounds, most of it during the past two months because of dieting. The day before admission he vomited for the first time, food and dark material.

His father died at ninety-one of bladder trouble, and also had cancer (?) of the stomach. One grandmother died of carcinoma of the breast at ninety-six, one brother of "tumor of the brain." The patient was always ill as a boy with colds and fevers. At ten he was ill in bed three months with "typhoid pneumonia." At twelve or thirteen he was in bed twice, each time for about a month, with "lung fever," and was given up by the doctors. At forty-three he was ill six weeks in the winter with bronchopneu-

monia and asthma. Every winter since that time he had more or less cough, sputum and wheezing, even now raising half a cupful of sputum a day. At fifty-five he had frequent night sweats for a year. At fifty-nine he had another attack of the respiratory trouble and got no relief until he went to the mountains. Nevertheless from boyhood until the present illness he had considered himself strong and healthy. For forty years he had had hemorrhoids. For years he had taken bromoquinine for cough and lung trouble and a weekly teaspoonful of sodium phosphate as a cathartic. Two years before admission he had nosebleed for an hour. For a year he had had slight incontinence of urine and much dribbling after micturition. He denied venereal disease. Twenty-three years before admission he weighed 265 pounds, his best weight, two years ago 214 pounds, at present 222½ pounds.

Clinical examination showed a very obese man in no discomfort. The skin showed several pedunculated fibromata and pigmented nevi. Teeth carious. Marked pyorrhea. Cervical glands slightly enlarged. Marked barrel chest. Lungs slightly hyperresonant. Breath sounds slightly high pitched. Inspiratory crackles over both lower chests posteriorly, probably muscle sounds. Heart slightly if at all enlarged. Sounds of fair quality. Pulses of fair volume and tension. Blood pressure 130/85. Abdomen very obese, slightly tender in the epigastrium. Small masses of areolar tissue in the abdominal wall. Umbilical ring slightly enlarged. Long external hemorrhoids. Prostate moderately tender. Pupils and knee-jerks normal. Ankle-jerks sluggish.

Urine normal in amount, specific gravity 1.012 to 1.018, one to three leucocytes per high power field at two of three sediment examinations, one red blood cell at one, residual urine 25 cubic centimeters; culture, no growth. Renal function 25 to 50 per cent. Blood: 9,850 leucocytes, hemoglobin 75 per cent., reds 4,496,000, slight achromia. Wassermann negative. Non-protein nitrogen 30 milligrams. Fasting contents of the stomach 22 cubic centimeters of dirty brownish material, no free hydrochloric acid, total acid 20 per cent., guaiac very strongly positive. Test meal 60 cubic centimeters of slightly turbid fluid with 80 per cent. dirty looking sediment, no mucus, no free hydrochloric acid, total acidity 23 acid per cent., guaiac strongly positive. Microscopic examination of both showed yeast, starch, leucocytes, fat and bacteria.

X-ray plates which were not entirely satisfactory showed questionable pathology of the gall-bladder. Plates of the teeth suggested pyorrhea and a probable root abscess. Examination with barium showed the stomach high, fixed, of the hypotonic type, with sluggish peristalsis. Ten-



der points were absent. There was a large annular filling defect involving the antrum and the pyloric end. There was a six-hour residue of about one-third of the meal. The first portion of the duodenum was not seen. The head of the column had reached the cecum.

In view of the patient's weight, appearance and the X-ray findings a surgical consultant agreed with the medical men that operation was inadvisable.

January 21 the patient was discharged.

After leaving the hospital his symptoms became steadily worse. His diet consisted chiefly of a little malted milk and soup. He was unable to retain any food more than an hour, and often vomited within a half hour. The vomitus consisted of about half a cupful of partly digested slimy greenish very bitter material, never blood tinged or like coffee grounds. With the vomiting there was some nausea and gas. He had constant dull aching pain localized to the region about the umbilicus but once in a while radiating to the sides and the back, severe enough to keep him awake at night until relieved by suppositories. He had used these every night for several weeks. His bowels were very constipated. For the week before readmission he had been too ill to take an enema and for three days had had no stool.

March 5 he reentered the hospital, looking old, anemic, sick and weary. Clinical examination was as before except that there were palpable supraclavicular glands on the left. Chest expansion was poor. Red count and hemoglobin normal.

The patient was able to take very little by mouth without vomiting. Fluids were maintained by rectal taps. March 9 he appeared much worse. A surgical consultant reported, "... Considering the nodules at the umbilicus, nodules in the liver, weight and general condition I advise against any interference." March 11 the patient was in a critical condition, with mucus in the throat and such marked difficulty with respiration that he had to sit up absolutely straight. The temperature rose to 100.4°, the pulse to 122, the respiratory rate to 34. March 12 he died.

#### DISCUSSION

BY RICHARD C. CABOT, M.D.

#### NOTES ON THE HISTORY

This is the history of a cancer of the stomach. Knowing these symptoms and knowing that he died, gastric cancer would be anybody's first guess. But there are a number of points not characteristic of carcinoma in the history of the latter weeks before he entered the hospital. The relief by soda is not common, and that he should vomit so late and lose so little weight is not common if that is the diagnosis. On the other hand

gastric ulcer at his age and with so short a history is improbable.

The patient's early history sounds like tuberculosis.

It does not seem as if he had lost any weight but rather gained, so far as the figures go.

#### NOTES ON THE PHYSICAL EXAMINATION

"Small masses of areolar tissue in the abdominal wall." Does anybody know what that means?"

DR. SEELEY G. MUDD: They were small masses apparently of adipose tissue in the abdominal wall such as are occasionally found in obese people. They suggested possible metastatic nodules, but on closer examination were thought not to be of that type. The medical consultant thought it unnecessary to remove one for examination.

DR. CABOT: I suppose he has a large prostate.

DR. CRABTREE: It is a pretty mild prostate.

DR. CABOT: But there is nothing else we ought to think of as a result of his residual, is there?

DR. DRESSER: We have one rather poor film. It shows, as is said, a filling defect at the pyloric end of the stomach. In a man of this age we can conclude pretty positively that the diagnosis is cancer.

DR. CABOT: The patient was discharged undoubtedly with a diagnosis of inoperable cancer of the stomach.

#### DIFFERENTIAL DIAGNOSIS

Certainly I do not see any reason to deviate from the guess that we made about the history in the very first lines. A man who has been well so far as gastric complaints are concerned until within six months of his death, then has continuous stomach trouble, with blood in the stomach contents, pain aggravated by food though (contrary to rule) relieved by soda. The absence of any loss of weight is the striking point against cancer. Still, with so much on the other side I do not see how anybody could have any doubt, even if we did not have that very definite X-ray consultation. The surgical consultant at the end mentions nodules in the liver, also at the umbilicus, and this nodule above the clavicle, so that we get confirmation there.

It is striking that a man with such advanced carcinoma as we must suppose this to be should have no anemia. I have often commented on this, that small cancers of the stomach may produce tremendous anemias, and big cancers often none. I do not think anybody knows the reason for this.

As to his lungs, he had a great many symptoms and very little to show for them on physical examination. It is the sort of case where one might consider bronchiectasis, as he had so much sputum and cough for such a long time. But we have nothing definite on physical exam-

ination, and no X-ray of the chest. So I do not see how we can say anything definite about his lungs. There is nothing in the examination of his heart to show any lesion. It seems that he died of carcinoma of the stomach with various metastases, and nothing else.

X-RAY INTERPRETATION JANUARY 19

The findings are those of an organic lesion involving the pyloric end of the stomach, partially obstructive; probably malignant.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Carcinoma of the stomach.  
Hypostatic pneumonia (?).

DR. RICHARD C. CABOT'S DIAGNOSIS

Carcinoma of the stomach with metastases.

ANATOMIC DIAGNOSIS

1. *Primary fatal lesion*

Adenocarcinoma of the stomach with metastases in peritoneum, mesenteric insertion, intestines, mesenteric and retroperitoneal glands and in liver.

2. *Secondary or terminal lesions*

Hypostatic pneumonia.  
Arteriosclerosis.  
Hypertrophy and dilatation of the heart.

3. *Historical landmarks.*

Chronic pleuritis.

DR. RICHARDSON: This was a frank case of adenocarcinoma of the stomach with metastases in various places. He was a stout, well developed white man. The peritoneal cavity contained about 1000 cubic centimeters of thin, pale, fairly clear fluid. The peritoneum generally was studded over with plaques of new growth tissue. The appendix and esophagus were negative. The stomach, from a point about five centimeters above the pylorus and extending upward nearly to the esophagus and practically around the stomach wall, presented a large, thick layer of new-growth tissue. The greater curvature of the stomach in the region of the new growth was bound by old adhesions to the pancreas and transverse colon. The pylorus was negative.

We seldom see metastases from cancer of the stomach scattered along the mesenteric insertion of the small intestine. It was so in this case however. Small nodules of new-growth tissue were scattered along the mesenteric insertion, and there were many nodules here and there on the serosa of the intestine. On the mucosal side of the intestine these rounded up beneath the mucosa, and this mucosal surface showed in places necrosis and degeneration, in other words

ulcerations,—a peculiar kind of ulcer of the small intestine. The intestine otherwise was negative.

The mesenteric and retroperitoneal glands were enlarged and showed new-growth infiltration. The liver was ten centimeters below the costal border in the right mammary line. The diaphragm on each side was at the sixth rib. The surface of the liver showed plaques of new-growth tissue scattered over it, but the liver tissue itself showed only a few small nodules for which we had to search. The organ weighed 2100 grams. The gall-bladder and bile ducts were negative.

DR. CABOT: Do you believe there was anything they could have felt through the abdominal wall?

DR. RICHARDSON: They might have felt the plaques of new-growth tissue in the peritoneum. There were old pleural adhesions binding down the lungs on each side. We found considerable mucopurulent fluid in the trachea and bronchi. In the lungs there were large areas of hypostatic pneumonia.

The heart was moderately enlarged, weighing 516 grams. The valves were frankly negative. The coronaries were free and capacious. The aorta and great branches showed marked arteriosclerosis, fibrous and fibrocalcereous in character.

The spleen weighed 200 grams and showed no lesions. The adrenals were negative.

The combined weight of the kidneys was 330 grams. They were in good condition. The cortex was five to six millimeters.

The prostate, seminal vesicles and testes were negative.

A PHYSICIAN: Do you think the duodenum was affected?

DR. RICHARDSON: No.

DR. CABOT: It seems to me the only thing to remember here is that a person can be very far, have no anemia, and die of extensive gastric cancer.

CASE 13182

SPLENECTOMY FOR MASSIVE GASTRIC HEMORRHAGE WITH SPLENOMEGALY

SURGICAL DEPARTMENT

An unmarried American stenographer twenty-one years old entered February 14 for study of dull aching pain in the left side of the abdomen.

For the past five years until twenty months before admission she had had vague pains in the right side. Twenty months ago she was seized with what was thought to be a fairly typical attack of appendicitis. A normal appendix with concretions was removed. The gall-bladder and pelvic organs were reported normal. A month

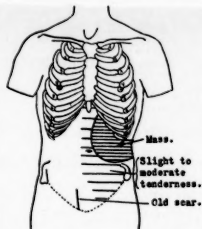
later she had an attack of epigastric pain and tenderness with vomiting and a temperature of 101°. Her throat was inflamed. Two days later she had a second similar attack. Seventeen months before admission the pains were much like those before operation. There was epigastric pain most of the time. Her physician felt signs of resistance in the left upper quadrant but no definitely palpable spleen. A gastro-intestinal series was done at this time without definite results. A question of visible gall-stones was raised. A second gastro-intestinal series confirmed the first. She continued to have discomfort in the stomach for the next few months. Ten months before admission she had many canker sores in the mouth. Nine months before admission she had enough pain in the stomach to interfere with work. Her physician found soreness over the gall-bladder. A month later she vomited blood, "a pint," and had purpuric spots over the body, black stools and tenderness over the spleen. She was sent to a hospital where two days later blood examination showed 3,500,000 red cells, hemoglobin 90 per cent., leucocytes 5,800, smear essentially normal, increased fragility of red cells. Laboratory work otherwise negative. (There is no mention of platelets, bleeding or clotting time.) After a month's stay in the hospital she returned to work. Six months before admission to the Massachusetts General Hospital without apparent cause she began to vomit blood amounting to one pint(?). She continued to have pain in the left side of the abdomen. Three months before admission she again had nausea and vomiting followed by profuse menstruation. She and her physician gave contradictory stories as to whether there was hematemesia at this time. Since this time she had had more or less constant and severe pain in the left upper quadrant and had been very weak. Two weeks before admission she became nauseated and again vomited "a pint of blood." The pain was very severe. She went to bed, had hiccup for a day and vomited all her food for two days. At this time she noticed small red spots on her arms lasting two days.

Her father died of diabetes and heart disease. There was no family history of anything else of significance.

She had always bled and bruised easily from very slight trauma. In childhood she had nose-bleeds once a month. Her catamenia were always profuse and painful, and were very irregular until her appendectomy. She had constant white discharge for a week preceding her periods. She was always subject to sick headaches with nausea and vomiting.

Clinical examination showed a well nourished, very sallow young woman with questionable slight icterus of the skin and sclerae. No purpuric spots were seen. The head, neck, heart

and lungs were normal. The abdomen was rather tight; palpation was difficult. In the left upper quadrant (see diagram) was a fairly definite mass descending slightly with respiration, probably spleen, although the notch could not be felt. There was slight to moderate tenderness throughout the left lower quadrant and the left loin and costovertebral region. Vaginal examination was not done. The knee-jerks were increased. The other reflexes and the pupils were normal.



Before operation the urine was normal. (Amount not recorded.) The blood showed 4,400 to 2,050 leucocytes, polynuclears 64 to 67 per cent., hemoglobin 70 to 75 per cent., reds 4,050,000 to 3,860,000, no achromia, slight anisocytosis, platelets slightly to markedly reduced, reticulated cells less than 0.1 per cent. Bleeding time 3.5 to 5.5 minutes. Clotting time February 14 5 minutes, with calcium chloride 8 minutes; February 17 12 to 19 minutes, with calcium chloride 25 minutes. Non-protein nitrogen 27. Icterus index 3 to 5. Clot reaction normal February 15, slight February 17. Fragility test: beginning hemolysis .40 per cent., complete hemolysis .34 per cent. Wassermann negative.

Before operation temperature 98° to 99.5°, pulse 80 to 109, respirations normal.

All during the night of February 17 the patient felt nauseated and complained of much pain over the splenic region in spite of 1/8 grain of morphia and 1/150 scopolamin. At five o'clock the next morning she suddenly vomited five ounces of fairly bright red blood. She was given another 1/6 grain of morphia. The pulse went from 70 to 115, the blood pressure from 130 to 105. At quarter past six she vomited 20 ounces more of blood. The blood pressure was 125/75, the pulse 105, of fair quality. She felt very thirsty and weak and looked paler, but seemed in surprisingly good condition physically and mentally.

February 18 transfusion of 600 cubic centimeters of blood was done, followed by operation. The next day she was in surprisingly good condition. She had no more nausea or vomiting. Beginning the afternoon of February 19 the temperature ranged from 99.5° to 102° for five days. A medical consultant could find nothing in the throat or heart to account for the fever, and no definite signs in the lungs, though the breath sounds seemed somewhat diminished at the right base. She looked and felt better every day, and had no symptoms except that the night of February 27 she had some pain below the right scapula not aggravated by breathing. The

temperature, which since February 24 had not been over 100.5°, was again elevated, reaching 103.5° March 2. The pulse ranged from 96 to 120. The respiration was normal. The medical consultant again could find nothing but doubtful slight dullness at the extreme left base with diminished breath sounds. February 20 the bleeding time, red count and smear were normal. The platelets were not decreased. February 26 the white count was 13,800; the polynucleurs were 80 per cent.

A portable X-ray March 3 showed mottled dullness at the left base which obscured the outline of the diaphragm on this side. The upper margin of the dull area was poorly defined, apparently most extensive behind the shadow of the heart. There was no narrowing of the intercostal spaces. The heart was not displaced. The diaphragm was high as far as could be determined. The lung fields except for the area described appeared normal.

March 5 the patient began to have periods of unconsciousness of sudden onset preceded by some warning, not associated with apnea, dyspnea, pallor, cyanosis or change in pulse or blood pressure. Two medical consultants agreed in believing these to be functional in origin.

#### DISCUSSION

BY BETH VINCENT, M.D.

This was a case which I saw in consultation with the Medical Department the day before operation. The outstanding features of the case at that time were the history of vomiting blood in fairly large quantities on several occasions, coupled with a very evident involvement of the spleen. The history showed that this splenic enlargement had existed for some time. The patient's chief complaint was of very severe pain in the splenic region.

The blood examination showed a moderate anemia, diminution in the white count, also diminution in the platelet count, which, coupled with the history of purpuric spots, increased catamenia, and the blood from the stomach, raised the question of thrombopenic purpura.

An X-ray examination taken outside of the hospital showed nothing abnormal in the stomach. Before making a final diagnosis it was planned to have a second X-ray examination in this hospital, but that was prevented by the advent of another massive hemorrhage from the stomach that night and the next morning, which necessitated transfusion and indicated immediate operation. It was felt at the time that it was best to take advantage of this transfusion and explore the abdomen rather than wait for another hemorrhage and the necessity of another transfusion.

Three pre-operative diagnoses were offered: (1) Thrombopenic purpura hemorrhagica. (2) Cirrhosis of the liver with splenomegalia and hemorrhages from large esophageal varices. (3)

Splenic anemia followed by cirrhosis of the liver and bleeding from the large esophageal veins.

The operative findings were as follows: The spleen was of normal color, non-adherent, was enlarged to the extent that the lower margin reached halfway between the costal border and the umbilicus. There was no ascites. The liver was of normal color, firm, and somewhat enlarged. The surface was roughened by small elevations. The gall-bladder was negative. All the visible veins which emptied into the portal system were greatly enlarged, especially those at the hilus of the spleen and those in the gastrosplenic omentum at the greater curvature of the stomach. Extending from the umbilicus just underneath the peritoneum into the round ligament of the liver were three veins as large as a lead pencil. Inspection and palpation of the stomach was negative with the exception of the enlargement of the veins. The spleen was removed without great difficulty and the patient left the table in good condition.

Convalescence was normal aside from the temperature, which seemed to be accounted for by a slight pulmonary complication in the left lower chest.

The fainting spells, as has been said in the report, are supposed to be functional. The patient is about to be discharged and today is in very good condition.

DR. CABOT: What is your prognosis?

DR. VINCENT: I think the prognosis is uncertain but better with the spleen out than in. The prognosis with regard to the gastric hemorrhages is very uncertain. They probably occurred from enlarged veins which are not obliterated by removal of the spleen, but there is a possibility that the removal of the spleen will prevent the formation of other veins.

An interesting point in this case was the great pain in the spleen, which was apparently due to acute distension of the capsule from the back pressure of blood in the portal circulation. Whether this pressure was secondary to obstruction in the cirrhotic liver or in the portal system itself from thrombosis could not be said.

DR. CABOT: In the last of your three pre-operative diagnoses, splenic anemia with some cirrhosis of the liver, you said that the hemorrhage was accounted for by esophageal varices. Isn't there a chance that it might be accounted for by some of these big veins about the stomach?

DR. VINCENT: Yes. I think it would have been more accurate to say esophageal or gastric veins. The diagnosis of thrombopenia is not sufficient to account for all the symptoms or all the operative findings. There was a diminution in the platelets and there was perhaps an abnormal tendency to bleed. This I think could probably be accounted for by a secondary thrombopenia that is sometimes observed in diseases of the liver.

My own feeling is that the proper diagnosis

is splenic anemia with cirrhosis, although at this stage of Banti's disease it is impossible to differentiate that from cirrhosis and secondary splenomegalia.

DR. CABOT: Do you think the blood will stay normal now that the spleen is out?

DR. VINCENT: One determination on February 20 showed, as would be expected, an elevation in the platelet count which is always observed after removal of the spleen. In true thrombopenic purpura this increase of platelets is not necessarily maintained.

DR. CABOT: Did you see the spleen, Dr. Mallory?

DR. TRACY B. MALLORY: Dr. Hartwell's description of the spleen is as follows:

"The spleen is enlarged. It weighs 580 grams and measures 6 by 9 by 17.5 centimeters. It has normal surface markings, with a thick opaque capsule. On section it has a deep red firm surface without visible follicles.

"Microscopic examination shows an increase in the connective tissue of the reticulum and the lymphoid cells in the sinuses of the pulp. Megakaryocytes and nucleated reds are present. The follicles are small and scattered.

#### Hyperplasia."

These findings are consistent with a diagnosis of Banti's disease, but are not diagnostic.

DR. CABOT: Did you ever hear of a patient with these findings at operation having got well?

DR. VINCENT: It is difficult to speak definitely of cures by splenectomy in splenic anemia, because it is a disease of such long standing without operation. Results of the reported cases show that the progress of the disease is at least checked by removal of the spleen; it does not always prevent subsequent gastric hemorrhages. In a case of splenic anemia with gastric hemorrhage operated upon, I think, by Dr. Cushing when he was in Baltimore the patient had bleeding from the stomach about twenty years after splenectomy.

#### LATER NOTES

By March 11 the periods of unconsciousness had ceased, the chart was normal, and the patient was up in a chair. March 14 a Rosenthal bromsulphalein test showed the liver function essentially normal. The blood count, including the platelet count, was practically normal. March 15 the patient felt very well and the wound was well healed. March 16 she was discharged.

#### DIAGNOSIS

Splenic anemia.

#### THE OPENING OF THE PONDVILLE HOSPITAL FOR CANCER PATIENTS AT NORFOLK

GOVERNOR FULLER will speak at the opening of the Pondville Hospital at Norfolk for cancer

patients on June 21. Besides complete equipment for operative, X-ray and radium service to the ninety patients which the institution will accommodate, there will be a thoroughly competent consulting staff and a visiting staff. The staff appointments to date include the following:

#### CONSULTING STAFF

Chief—Dr. Robert B. Greenough, Director Cancer Commission of Harvard University.

Dr. Stephen Rushmore, Dean, Tufts Medical School.

Prof. William Duane, Professor of Biophysics, Harvard University.

Dr. Charles T. Howard, Professor of Surgery, Boston University.

#### VISITING STAFF

Chief—Dr. Ernest M. Daland, Surgeon, Huntington Memorial Hospital.

Radiologist—Dr. Isaac Gerber, Former Roentgenologist, Boston City Hospital.

Pathologist—Dr. Homer Wright, Pathologist, Huntington Memorial Hospital.

Internist—Dr. Henry Jackson, Jr., Visiting Physician, Boston City Hospital.

Laryngologist—Dr. D. Crosby Greene, Laryngologist, Huntington Memorial Hospital.

Dermatologist—Dr. Arthur M. Greenwood, Dermatologist, Massachusetts General Hospital.

Urologist—Dr. Roger C. Graves, Urologist, Carney Hospital.

Gynecologist—Dr. Joe Vincent Meigs, Gynecological Consultant, Tumor Clinic, Massachusetts General Hospital.

Oral Surgeon—Dr. Richard H. Norton, Oral Surgeon, Massachusetts Homeopathic Hospital.

Physicist—J. C. Hudson, M.S., Department of Physics, Harvard University.

The superintendent of the hospital is Dr. Lyman Asa Jones, who, after graduation and hospital service, did private practice in Williamstown and North Adams and for the past twenty years has been one of the State district health officers.

Miss Elizabeth Ross, R.N., is to be superintendent of nurses. Before the war Miss Ross was superintendent of the Health Center of the Norwood Civic Association; during the war, division director of nursing for New England for the American Red Cross; since the war has been associate superintendent of the New Haven Visiting Nurse Association and has recently had charge of the reorganization of the Newton District Nursing Association.

Dr. J. F. Kellogg is to be surgical resident. He is just completing an appointment on the fifth surgical service at the Boston City Hospital.



## THE BOSTON Medical and Surgical Journal

Established in 1858

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

For three years HOMER GAGE, M.D., *Chairman*  
EDWARD C. STREETER, M.D.  
EDWARD W. TAYLOR, M.D.  
For two years WILLIAM H. ROBEY, JR., M.D.  
ROGER I. LEE, M.D.  
ROBERT B. OSGOOD, M.D.  
For one year JOHN W. BARTOL, M.D.  
HORACE D. ARNOLD, M.D.  
CHANNING FROTHINGHAM, M.D.

### EDITORIAL STAFF

DAVID L. EDSALL, M.D.  
REID HUNT, M.D.  
FRANCIS W. PLARROT, M.D.  
JOHN F. SUTHERLAND, M.D.  
GEORGE R. MINOT, M.D.  
FRANK H. LAHEY, M.D.  
STEPHEN RUSHMORE, M.D.  
HANS ZINSSER, M.D.  
BENJAMIN WHITE, PH.D.  
HENRY R. VINTS, M.D.  
ROBERT N. NYE, M.D.  
SHIELDS WARREN, M.D.

WALTER P. BOWERS, M.D., *Managing Editor*

### ASSOCIATE EDITORS

GEORGE G. SMITH, M.D.  
WILLIAM B. BREED, M.D.  
JOSEPH GARLAND, M.D.

SUBSCRIPTION TERMS: \$5.00 per year in advance, postage paid for the United States, \$7.50 per year for all foreign countries belonging to the Postal Union.

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the Journal office, 126 Massachusetts Ave.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

### READY MADE BIBLIOGRAPHIES

In these days of Service (with a Capital S), it is not to be wondered at that enterprising minds have conceived the idea of supplying for writers of medical papers complete bibliographies of the subject treated, and abstracts of the literature dealing with the topic in question. Some arguments can be advanced in favor of this sort of service. More complete bibliographies can doubtless be provided than could be got together by the average writer. There is a saving of labor. Once the agency which supplies such service gets fairly under way, it will have on hand bibliographies and abstracts on all the usual themes, and can dispense them with utter impartiality, so that one writer is as advantageously situated as another, so far as the background culled from the literature is concerned.

Yet in spite of these recommendations, the JOURNAL views with alarm this opportunity to buy literary material ready made. In the first place, if the system is widely employed there will be exactly the same bibliography at the end of every article which deals with a given subject. The reader will glance at the long and imposing list of references and will immediately

discount its value. His disregard for lists of references will include not only those which were bought and paid for, but will eventually extend to those which represent real effort on the part of the writer. Soon the bibliography appended to an article will have as much weight as the "testimonial" which accompanies the advertisement of a proprietary remedy. In the second place, we doubt if an author can get from a series of abstracts a true appreciation of the opinion of other writers. He would do far better to read carefully a few original articles, than to try to summarize the opinions of a large number from abstracts alone. In the third place, we are sufficiently old-fashioned to believe that true scholarship should depend upon the consultation of original sources and should be based upon honest, conscientious, painstaking labor. A really meritorious communication cannot be written otherwise.

In this connection it is interesting to note that the Medical College of the Long Island College Hospital of Brooklyn has inaugurated a course in medical literature, in which students will be shown the value of medical literature and will be taught how to use a library. It has been suggested that the students of the medical schools about Boston be given the opportunity, in groups of ten or twelve, to spend an evening with Mr. Ballard at the Boston Medical Library. Instruction in the proper method of using a library and in the way to dig out original sources would be both fascinating and useful. We hope that something may be done in this direction, so that students will acquire an appreciation of the value of medical literature, and will be diverted from the pernicious scheme of purchasing a lot of second-hand impressions of the opinions of the great writers of medicine. This latter is not playing the game, and sportsmanship is as admirable in medicine as it is in football.

### THIS WEEK'S ISSUE

CONTAINS articles by the following authors:

JOHNSON, PEER P., B.A.; M.D. University of Vermont Medical School 1900, F.A.C.S.; Surgeon to the Beverly Hospital, Member New England Surgical Society. His subject is: "Report of a Case of Fibromatosis of the Pelvic Colon." Page 721. Address: 163 Cabot Street, Beverly.

WOLFF, H. G., B.S.; M.D. Harvard Medical School 1923, Position in Department of Neuro-pathology Harvard Medical School. His subject is: "Disseminated Sclerosis with Syphilis." Page 723. Address: Department of Neuropathology, Harvard Medical School, Boston.

GOTTLIEB, JULIUS S. B., M.D. Boston University Medical School 1924, Resident Pathologist

Massachusetts Homeopathic Hospital and Assistant in Pathology Boston University School of Medicine. His subject is: "A Review of Jewish Opinions Regarding Postmortem Examinations." Page 726. Address: 80 East Concord Street, Boston.

JOSLIN, ELLIOTT P., A.B.; M.D. Harvard Medical School 1895, Consulting Physician to the Boston City Hospital, Physician to the New England Deaconess Hospital, Clinical Professor of Medicine Harvard Medical School, American Society of Chemical Investigations, etc. His subject is: "Autopsies Upon Jews and Gentiles." Page 728. Address: 81 Bay State Road.

LARRABEE, RALPH C., A.B.; M.D. Harvard Medical School 1897, Visiting Physician Boston City Hospital in charge of the Blood Service. Address: 912 Beacon Street, Boston. Associated with him is

SIDEL, NATHAN, M.D. Harvard Medical School 1923. Assistant in Medicine Boston City Hospital, Teaching Assistant in Medicine Tufts College Medical School. Address: 483 Beacon Street, Boston. They write on: "A Leukemoid Blood Picture in Syphilis." Page 730.

GREELEY, HUGH P., A.B.; M.D. Harvard Medical School 1909, Clinical Professor of Medicine University of Wisconsin. His subject is: "A Medical Program for Private Enterprise and Cooperative Community Organization." Page 731. Address: 1 S. Pinckney Street, Madison, Wisconsin.

WALKER, IRVING J., A.B.; M.D. Harvard Medical School 1907; F.A.C.S.; Visiting Surgeon Boston City Hospital, Surgeon Massachusetts Women's Hospital, Supervising Surgeon Malden Hospital, etc. His subject is "Anomaly of Bile Ducts." Page 733. Address: 520 Commonwealth Avenue, Boston.

AUSTIN, A. E., A.B.; A.M.; M.D. Harvard Medical School 1887, Formerly Professor of Biochemistry University of Virginia and Tufts College, Assistant Professor of Clinical Medicine Tufts College Medical School, Physician to Boston Dispensary Emeritus. His subject is: "Progress in Gastro-Enterology. Page 734. Address: 270 Commonwealth Avenue, Boston.

#### MEETING OF THE MASSACHUSETTS ASSOCIATION OF BOARDS OF HEALTH

THE Massachusetts Association of Boards of Health held its regular meeting at the Hotel Statler, Thursday, April 28. The principal subject under discussion was whooping cough with report of the recent study of program of treatment and control of this disease as made by the whooping cough commission of Boston.

The first speaker was Dr. George M. Lawson who reported a series of 5000 cases with a mor-

ality of about 150 deaths in Massachusetts. This mortality to a large extent refers to children under two years, and thirty of 110 deaths reported was under one year of age.

The study was concentrated on three important phases; first, the early diagnosis; second, prevention; and third, treatment.

Previous to the scientific study of whooping cough, the diagnosis depended very largely upon history and the appearance of the whoop. At the present time bacteriology is being employed in the problem of early diagnosis. It has been found that the ordinary culture of the nose and throat is not of any particular value. The two methods employed by the investigator consisted in dealing with washed sputum and plating of the material. The other method was by holding a slate covered with a culture medium before the patient during the paroxysm of coughing. In 1000 cases taken at the clinic of the Boston Floating Hospital isolation of the germ was secured as early as twenty-four days before a characteristic whoop. During the catarrhal stages, a very large percentage of the cases show the pertussis organism. After the beginning of the fourth week of the whoop the number of bacteria is negligible. Twenty cases studied at the Floating Hospital that were cultured every day up to the eighth day, all were positive. After the eighth and up to the seventeenth days of the whoop gradual decrease in the number of the bacilli was observed. It was felt that it had been demonstrated that an early diagnosis in the initial stage is possible. On the side lights of this investigation it was found that in about twenty-three positive cases the symptoms were only those found in a common cold, and characteristic whooping never developed. Four of this number were undoubtedly second-attack cases. He believed that many of the minor cases may have only the ordinary symptoms attributed to a common cold.

So far as quarantine is concerned bacteriological studies furnish a good indication of the time necessary in order to protect contacts. It is now customary to quarantine for four weeks from the onset of the whoop and there is no definite evidence confirmatory of the necessity of this requirement. In all probability the quarantine period of at least four weeks from the onset of the disease would be sufficient. It is very difficult to tell the exact time when quarantine should be imposed where the cases have been studied bacteriologically. It may be found to be sufficient to quarantine for three weeks after the onset of the whoop. Bacteriology may be of great assistance in the immunization of cases and in preventing the spread from doubtful cases and carriers.

This report must be considered as a record of a preliminary study and the campaign will be continued.

Dr. Lawrence W. Smith continued the discus-

sion paying special attention to the treatment of the disease. He referred to the work done by Dr. Bowditch in the Floating Hospital in the application of X-Ray which was suggested by chance, and since then a thorough study of the effect of this agent has been continued.

Until the commission began its work over a year ago 1520 cases had been studied in different clinics. So far as diagnosis is concerned he felt that study of the blood was particularly important. Seventy per cent of the cases show definite evidence in blood changes and the X-Ray picture when interpreted by an expert show almost always evidences of the effect of the disease. A very high percentage of suspected cases give constant radiological evidence. Something like eighty per cent of cases have been diagnosed by the X-Ray pictures. He felt that early diagnosis is very important if the best results are to be obtained by X-Ray and vaccines. Out of 1400 cases, 250 have been treated by X-Ray, 600 by vaccine, and 300 by both X-Ray and vaccine, two hundred others were used as controls. It has been found hard to get lay testimony of value with reference to the use of the controls because of the varying manifestations of the disease. He was convinced, however, that the combined treatment was very satisfactory. He felt that the earlier vaccines were used, the better results would be obtained, the X-Ray being of especial value in long-continued cases and in treating the very young patients. He felt very sure that in those cases with peri bronchial infiltration the X-Ray had very definite beneficial effects for fifteen to twenty per cent showed very definite improvement and fifty per cent an appreciable improvement. Fifteen to twenty per cent might not be benefited.

In their studies they had been led to believe that the use of vaccine had produced better results than had been expected. Striking results are often observed after the initial period had been passed and the vaccine had apparently helped to establish the developing resistance. So far as the endorsement of the treatment is concerned, more people are being convinced that there is a certain value to it and a larger proportion of affected children are coming to be treated. He acknowledged that vaccine therapeutics was regarded as of little value by some observers. He felt that failure to get good results was due to unorthodox methods employed. Freshly prepared vaccine is much more effective and should be of a more specific type than those products now being distributed by some manufacturers. He felt it was necessary to give very much larger doses of the bacilli than have generally been recommended and the preparation which is being used in the clinic contains 20 billion bacilli to each c.c., one-half c.c. of this preparation is used at first, the immunization being build up by vaccination every second

day so that at the end of a week fifty to sixty billion of the organisms have been injected. The average case only gets four to five doses of vaccine.

Several clinics have been supplied with vaccine and good results have been reported except in one instance. He believed that the prophylactic use of vaccine has its place and it is important to use as early as possible in contact cases. Nearly 300 cases have been given prophylactic treatment and of this number 175 did not develop the disease, even in those cases where there were other children in the same family suffering with the disease. Eighty cases in the series developed the disease but only thirty of the cases showed full manifestation so that in all probability prophylaxis was effective. Immunity may be conferred by the prophylactic use of vaccine lasting fully a year on the average. In using vaccine unless local reaction is produced there will not be a likelihood of systemic reaction. In the study of the disease, the mortality of cases reported during the period from 1908 to 1925 was 7.5 in Massachusetts, whereas in the year of 1925 this was cut in half which it is felt was due to the treatment, and for 1926 the mortality was less than one per cent and of this per cent several were suffering with complications such as bronchopneumonia and six of the cases were under six months of age. It was a peculiar fact that the natural immunity of early life with respect to other communicable diseases does not seem to exist in whooping cough. The commission felt that it was warranted in looking forward to beneficial results from the treatments employed.

In the discussion which followed both Dr. Place of the South Department of the City Hospital, and Dr. Denny of the Brookline Board of Health were not wholly convinced of the value of vaccine therapy up to the present time, but they felt that there might be reasons why the observations did not confirm the claims of the commission.

Dr. Bigelow brought before the meeting many matters of interest paying special attention to controlling the tourists' camps concerning which the recommendation of the State Department of Public Health had not been endorsed by the legislature, so that the problem rests now with the local boards of health. He particularly requested the coöperation of the local boards of health and members of the Association in dealing with matters of public welfare. He reported that it had been said that the State Department of Public Health was constantly making trouble for the local boards. He wanted the local boards to realize that health problems were matters of coöperative interest and that he was very desirous of building up a number of effective programs dealing with public health measures.

In referring to pasteurization, although this matter has not received the support which had

been expected of the legislature he felt that there was imposed on local boards of health responsibility with reference to the supervision of the pasteurization plants. He asked for a conference on May 20 at 11 A. M. when all who might be interested would meet with the State Department of Public Health.

So far as any attempt to keep records of immunization of cases by antitoxin, as requested, was concerned, he felt it was useless to attempt any such compilation.

He thought that a possible discussion for the future meetings of the Association might be under the title "What is the matter with the Department of Public Health?" and would be of interest. He further felt that it would bring about a much better understanding of the problems with which this department has to deal. He would also like to raise the question as to "What is the matter with the local boards of health?" and have both questions studied at the same time.

Referring again to the matter of summer camps he said that extensive studies had been made on this subject in many of the cities in the Union but that there was little unanimity of opinion as to how this problem should be attacked. He answered several questions which were propounded as to the authority of the State Department of Health and the responsibility of the local boards.

The meeting was very largely attended and was considered to be one of the most valuable that has ever been conducted.

### MISCELLANY

#### ABSTRACT OF REMARKS MADE BEFORE THE WINCHESTER MEDICAL CLUB BY DR. GEORGE H. BIGELOW, STATE COM- MISSIONER OF HEALTH, APRIL 26, 1927.

THE world was thought to be flat because it looked flat and for a very long time that was the end of it. A straw vote of all the peoples of the world today would probably be overwhelmingly in favor of flatness. Much of our curative and preventive medicine now is based on equally inadequate evidence. We urge that tonsils, teeth and undernourishment, for example, be corrected in our children in order that they may be more robust, and as an added inducement to that robustness we often imply that they will do better in school. But do we know that the underweights are more frequently absent, or that those with chronically infected tonsils must more frequently repeat a grade in school. Again, we sit up nights pawing over our reported cases of disease, past and present, and we draw all sorts of conclusions as to what we may expect of these diseases in the future. Then enters an iconoclast who says that the reports are so in-

adequate they might as well be thrown out the window. I have wondered what is under this hypothetical window out of which it has become so fashionable to throw everything one has been taught to hold so dear. The accumulation must vie with the reported appearance of the Somerville-Cambridge dump of last winter. But is the measles reported in a given year nine or ninety per cent of what actually occurs? And how about infantile paralysis, tuberculosis, and the other so costly diseases? Still again, the Legislature has decided that the State is to formally play a part in the control of the non-communicable diseases of adult life, through its program for cancer. But tomorrow it may be arthritis, or heart disease, or diabetes. We must be prepared to guide the evolution of these programs. To do so we must know the volume of the problem. True, we have the death returns. But have these persons whose finis is so recorded been in whole or in part incapacitated by the disease for six days, six weeks, six months, or six years. In one case the problem is one thing, in the other another. We want to know, or at least we ought to want to know, definitely. Otherwise, we shall be found attempting to fit a flat program to a round world.

How does all this apply to Winchester? Because of the unusual completeness of your school records and the splendid coöperation of your school authorities and Board of Health, we plan to collect data in May which should throw some light on these points. The information will come from the school records and from a personal visit by a member of the staff of the State Department of Public Health to every home. We desire information regarding every member of the household. In order to correlate this data with that from the schools, names must be asked, but the information will be used for statistical purposes only and in the report no name or identifying data will under any circumstances appear. The interview will be a nuisance lasting some ten minutes but the importance of the study makes us dare to so impose and to bespeak coöperation.

We will find out whether children without defects are more regular in their school attendance and less likely to repeat grades than those with such defects uncorrected. We will find out how much whooping cough and other communicable disease there was in town last year. We already know how much has been reported. We will learn how many of the adults consider themselves well and how many consider themselves sick. I doubt not we will be staggered by this figure. What are the symptoms of those not well? Are most of the "sick" in the wage earning age or beyond? How many days have they lost from work in the last year? Are they or a neighbor treating the case, or have they had a doctor or one of the cultists? We will know the



volume and symptoms of adult sickness, or supposed sickness, in Winchester, and the age distribution of the same.

It is true that Winchester is an unusual community and the findings may differ materially with differing economic, industrial and racial conditions. But for that matter each of the three hundred and fifty-five cities and towns in the State are "unusual." We shall, of course, hope for an opportunity to repeat the study elsewhere. But even if this does not materialize we shall have at the end a fairly clear idea of certain of the disease problems in Winchester and how adequately they are being met. Also it will contribute signally to our knowledge of the effectiveness, adequacy and future development of much that we now take for granted today.

### CORRESPONDENCE

#### OFFICIAL RECORDS IN RELATION TO HOUSE 999

Nothing can be more positive or final than official records in relation to matters of public record, such as House 999, and in a criticism of the report of a committee, however illustrious they may be as individuals, it is the collective effort, and not individuals, to whom adverse comment is made. When anyone writes, "And to insinuate there was something sinister in the supposed submission of the report to two separate committees is unjust" and "even if it had taken place"—the following correspondence definitely settles any further *supposition* about the matter, and while the special commission may not have caused the report to be subdivided, and submitted to the two committees, I respectfully suggest such action was peculiar, inasmuch as one part dealt with about a 25% increase in compensation to labor, and the other part dealt with a method of granting that increase without adding to the already excessive taxation and overhead of industries in Massachusetts, which is driving many of them to other States. The \$2,500,000 "acquisition account" paid brokers and agents might have been applied to increased pay for injured workmen and hospitals, if the report had been considered as a whole, and the recommendation of *three* on the commission who signed minority reports been adopted; these reports incidentally were signed by an Overseer of Harvard, the Secretary and Treasurer of the Massachusetts Federation of Labor, and the President of the American Federation of Textile Operatives. In relation to this subdivided report the following will be of interest, for it also shows the final verdict of both committees to whom it was referred:

Northampton, Mass., March 28, 1927.  
To the Clerk of the House of Representatives,  
State House, Boston, Mass.

Dear Sir:

Will you please inform me if I am correct in finding in regard House 999 (Report of Special Committee on Workman's Compensation) that the portion on the subject of State fund, minority reports on same, and single member findings was considered at a hearing before the Judiciary Committee February 10, 1927. And the remainder of the report dealing with increases in Compensation, etc., was considered by the Committee on Labor and Industries at some other date.

Very truly,  
J. G. HANSON.

The following reply was promptly received in the form of marked copies from the record of the Joint Judiciary Committee, page 34, and from Labor and Industries, page 38:

34

JUDICIARY, JOINT

Doc. No. Subject

H. 999. Report of the special commission appointed to investigate the effect of the present law relating to workmen's compensation in order to ascertain what changes appear to be necessary to cure any defects in said law which have risen since its adoption. (So much as relates to the establishment of a State fund for insuring the liability of employers, to the rules of evidence in hearings before the Department of Industrial Accidents, and to making the findings of fact by a single member final and conclusive.)

Hearing—February 10.

Report—No leg. necessary. H. March 14.

38

LABOR AND INDUSTRIES

Doc. No. Subject

H. 999. Report of the special commission appointed to investigate the effect of the present law relating to workmen's compensation in order to ascertain what changes may be necessary to cure any defects in said law which may have arisen since its adoption. (So much as does not relate to establishment of a State fund, to rules of evidence in hearings before the Department of Industrial Accidents, and to making the findings of fact by a single member final and conclusive.)

Hearing—February 9.

Report—S. Bill 239, March 8. No further leg. necessary. March 16.

In regard to the moon, I will say that the method suggested of taking grievances to the hospital trustees has been in effect the past two years. On noting that both the staff and the hospital had been well mulcted by insurance companies the trustees of the Cooley Dickinson Hospital, Northampton, passed the following rule in 1925: "Compensation cases will not be admitted to the open ward but will be cared for as semiprivate patients, and surgeons or physicians will not be required to give free service to any insured case or to any industrial accident case."

The rule was submitted to the Industrial Accident Board in a case at hearing, with the result that not only was the doctor ignored but the hospital was awarded less than before the rule was passed, and *this is a matter of public record*. Now if such suggestions as the commission made in view of what transpired after such suggestions had been tried, do not bring forth a comparison like mine, then I will accept a better one.

This matter of a State fund will undoubtedly appear on the ballot, in referendum, at the next election, and I hope all will read not only House 999 but the *other side* as presented at the hearings.

With all due thought to any opinion I might have of being able to write a better report I feel very strongly, in view of the two minority reports and of the negative action of one committee and partial action by the other, that nobody could have written a more futile one.

Just where the fault lies in that no important action seems to have been taken in a matter in which the commission made plain the fact that many changes were necessary, is difficult to determine.

But the question of a State fund is bound to be

kept before our citizens, not only in relation to Workman's Compensation, but to Automobile Liability Insurance as well.

No harm will be done by careful consideration of such a measure, even by "Main Street," so that eventually all may be able to vote on the question with a knowledge of both sides of the problem. Careful and intelligent perusal of my letter of March 3, checked with the report, and the proceedings of the hearings, will disclose no inaccuracies or misstatements, and I stand prepared to defend it all, with as definite proof as I have produced for these major parts.

Dr. J. G. HANSON.

Northampton, Mass., April 2, 1927.

#### AN OFFER OF FREE COPIES OF THE REPORT OF THE COMMISSION ON MEDICAL EDUCATION

Editor, *Boston Medical and Surgical Journal*:

Would you mind stating in your publication that we should be glad to supply a copy of the "Preliminary Report of the Commission on Medical Education" to any of your readers who may be interested in the general questions of medical education and practice? We should be glad to supply these copies without charge, and anyone desiring a copy of the report can obtain it by addressing Commission on Medical Education, 215 Whitney Avenue, New Haven, Conn.

Sincerely yours,

W. C. RAPPELEYE, M.D.

#### A NEWSPAPER SPEAKS UP ON PROPOSED CHIROPRACTIC LEGISLATION IN TEXAS

"When the chiropractic bill was pending in the Legislature, and immediately following the unfavorable report thereon by the Health Committee of the House, the *Brownwood Bulletin* (February 3) favored its readers with a most sensible discussion of the subject. As much as we are in need of good white paper for other purposes, we cannot resist the temptation to reproduce this editorial, and here it is:

##### "THE COMMITTEE ACTS WISELY

"An unfavorable report has been made in the Legislature on a measure proposing to establish a board of examiners for chiropractors, and to legalize the practice of this particular brand of quackery in Texas. It is hoped that the Legislature as a whole, if it takes up the measure, may have the good sense to accept the committee's report and block this attempt to place the seal of approval upon a so-called system of healing that is now outlawed by the State.

"The chiropractors have insisted that they want a State board of examiners for their profession, composed of chiropractors and for the purpose of examining chiropractors only, in order that incompetents may be weeded out and the "profession" established upon a little higher plane than at present. What they really want, however, is the sanction of the State of Texas for what they are pleased to call the "science" of backbone twisting as a means of treating disease. There are already countless memorials to the "science" in the graveyards of Texas, and it is not necessary to establish a board to weed out the incompetents; for the present medical practice act bars all of them as incompetent to treat disease, and the medical practice act needs no amendment.

"When anything goes wrong with the human body it is a serious matter. A little bit of the wrong kind of treatment may cause the whole machine to cease functioning and provide another job for the undertaker. The medical profession devotes its entire energy to the curing of disease and the remedying of conditions which produce disease. If there were any

virtue in backbone twisting, the medical profession would twist backbones instead of prescribing pills and powders. It is because quackery is dangerous that the doctors have made such strenuous efforts to banish it from Texas; and it is gratifying to note the action of the legislative committee on this proposal for legalizing the mulcting of Texas people by the practice of hocus-pocus spine "adjustments."

This article I cut out from the *Texas State Journal of Medicine*, April, 1927. I thought it might be of interest in your fight against chiropractors.

T. L. STORY.

Southbridge, Mass.

#### QUESTIONS OF ETHICS

1325 Commonwealth Avenue, Boston,  
April 8, 1927.

Editor, *Boston Medical and Surgical Journal*:

We hear every day from the pulpit of the medical profession about the ethics of the medical men. The average practitioner is always roasted by the high-brows of the medical societies for dividing fees and for many other crimes of that nature.

The writer of these lines must admit that splitting fees is an unforgivable crime. I also must admit that I do not deny the fact that every unethical deed laid at the door of the average practitioner is true.

I am not here to accuse nor to defend, but I am stating facts explaining and diagnosing our own professional disease. I wonder how many of the readers of this JOURNAL will agree with my diagnosis. My diagnosis is "Indifference," caused by the germ "Let George Do It." The symptoms are everybody for himself and the devil take the hindmost. Of course the American Medical Association has done wonders within the last twenty years to raise the medical standard in this country morally. However, no one can be called a Christian by having a Bible in every pocket. Every unethical medical act has its underlying base in the economic struggle to earn bread and butter.

I believe it is the duty of the A. M. A. nationally as well as of the County Medical Society locally to protect the economic interest of the physician or to protect his body as well as his soul.

It is about time that the local medical society of each and every State begin to protect the interest of the physician. What the teachers of our schools have already done our doctors of medicine may do in the future. The teachers have and are joining the "American Federation of Labor." The medical men of this country will in time be forced to join some labor organization, in order to be protected economically.

I have already stated in one of my previous letters in this medical journal that the physician has too many competitors on his hand to overcome.

Every hospital that is worth the name hospital is taking away the bread and butter of the physician by giving medical aid to people who can afford very well to pay a physician's fee.

The landlord is paid in advance but the physician is lucky if he gets paid at the end of the month.

The lawyer for writing on a piece of paper so-called "deed" or "bill of sale" gets an undisputed minimum fee of \$25.00, but when the learned doctor writes a few prescriptions for his patient after spending thirty to sixty minutes in examining him \$5.00 is considered highway robbery.

One lawyer was highly insulted when I called him up on Sunday asking for some information. The doctor is only too glad to give his service seven days a week, 24 hours every day, every week in the year, but gets paid in Heaven.

Not one department store in the city would be foolish enough to open a "Charge Account" until the prospective customer is found worthy of trust and

*credit.* We good-hearted physicians always trust everybody. When one patient refuses to pay his bill to one physician, the following day the patient opens an account with another good doctor. The department stores know "Who is Who." Why cannot the Medical Society have a *Black-List* of those that refuse to pay doctor bills? What is there unethical about that. I ask every physician within my reach? There is no use in teaching Ethics and Morality to the students in the Medical Schools. A student will surely not live up to it when he finds out that the landlord refuses on the first of the month to accept a check of Ethics instead of good American Cash.

I have the greatest respect for those gentlemen who talk Morality and Ethics, for their intentions are good, but their diagnosis is wrong. What would any up-to-date doctor think of any healer who tries to relieve or cure pain without trying to find the cause of the pain?

In order to have a healthy normal soul one must have a sound body. Improve the materialistic conditions of the physician and his standard of morality will be raised.

To my Co-Workers I am,

Very truly yours,

WILLIAM FRANKMAN, M.D.

#### CONNECTICUT DEPARTMENT OF HEALTH

##### MORBIDITY REPORT FOR THE WEEK ENDING APRIL 23, 1927

Diphtheria	31	Conjunctivitis, infec-	
Last week	21	tious	1
Diphtheria bacilli		Encephalitis, epidemic	1
carriers	8	German measles	11
Scarlet fever	106	Influenza	1
Last week	85	Mumps	35
Measles	58	Pneumonia, lobar	38
Last week	77	Septic sore throat	2
Whooping cough	20	Tuberculosis, pulmo-	
Last week	26	nary	22
Anthrax	1	Tuberculosis, other	
Bronchopneumonia	38	forms	2
Cerebrospinal meningitis	47	Gonorrhea	47
Chickenpox	44	Syphilis	32

#### NEWS ITEMS

**NOMINATIONS OF MEDICAL EXAMINERS**—Governor Fuller has presented to the Council the following names of physicians to serve as medical examiners: George L. Tobey, M.D., of Clinton, medical examiner Fourth Worcester District; James J. Goodwin, M.D., of Clinton, associate medical examiner Fourth Worcester District; Randolph Hurd, M.D., of Newburyport, medical examiner Third Essex District. As a member of the Board of Dental Examiners, George A. Thatcher of Brockton was nominated.

All of these will undoubtedly be confirmed by the Council.

**INCREASES ARE NOTED IN CASES OF SMALL-POX AND SCARLET FEVER**—The United States Public Health Service has issued the following statement regarding the prevalence of communicable diseases in the United States.

The 98 cities reporting cases used in the following table are situated in all parts of the country, and have an estimated aggregate population of more than 30,600,000. The estimated population of the 93 cities reporting deaths is more than 30,000,000. For weeks ended April 2, 1927, and April 3, 1926:

Cases reported	1927	1926
<b>Diphtheria:</b>		
42 States	1,801	1,281
98 cities	1,129	753
<b>Measles:</b>		
41 States	16,149	19,851
98 cities	4,620	9,862
<b>Poliomyelitis:</b>		
42 States	11	15
<b>Scarlet fever:</b>		
41 States	6,140	4,307
98 cities	2,596	1,717
<b>Smallpox:</b>		
42 States	1,094	865
98 cities	165	243
<b>Typhoid fever:</b>		
41 States	217	165
98 cities	47	58

—United States Daily.

#### HARVARD MEDICAL NEWS

The following scholarship awards to the first year students for the year 1926-27 have recently been announced.

**Name of Scholarship and to Whom Awarded:**  
David Williams Cheever—Nicholas Sarro.  
Charlotte Greene—Luther Milton Strayer, Jr.  
George Haven—Henry Gisler Clarke, Ralph Gause, Harold Henry Hamilton, Donald Ellwood Higgins, Albert Bradley Hodgman, Franklin Christian Hugenberger, Hugh Montgomery, Philip Solomon, Henry Joseph Stanford, Horace Chilton Sweet, David William Wallwork, James Martin Woodall.

At a meeting of the Faculty of Medicine, held on Friday, April 1, 1927, it was voted to recommend the following appointments which have since been approved by the Corporation (April 11, 1927).

New Appointment from April 1, 1927 to September 1, 1927: Roy Graham Hoskins, M.D., Research Associate in Physiology.

New Appointment from January 1, 1927, to September 1, 1927: Luther Gordon Paul, M.D., Instructor in Surgery.

Reappointment with change of title: From April 1, 1927, to September 1, 1927: Percival Bailey, M.D., Instructor in Neuropathology and in Surgery, from Instructor in Surgery.

The following Student Fellowship Awards for the Academic year 1927-28 have been recently announced.

**Name of Fellowship and to Whom Awarded:**  
George Cheyne Shattuck Memorial—Eugene Chellis Glover (4M).

John Ware Memorial—Harold Morrison Teel (3M).

Charles Eliot Ware—Leroy Dryden Fothergill (3M).

James Jackson Cabot—Thomas Tipton Walker (3M); Ashton Graybiel (3M).

DeLamar Student Research—Giles Waldo Thomas (4M); Bernard Maxwell Jacobson

(3M); Francis Curie Skilling (2M); Hugh Montgomery (2M).

Charles Sedgwick Minot—Otto Christian Yens (3M).

S. Parker Bremer—John Harold Talbot (4M).

## NOTICES

### INFORMATION REQUESTED

A PHYSICIAN has asked for information as to the possible danger in the use of a certain hair dye.

If any bad results have seemed to follow the use of a hair dye the information will be appreciated.

### UNITED STATES PUBLIC HEALTH SERVICE CHRONOLOGICAL LIST OF CHANGES OF DUTIES AND STATIONS OF COMMISSIONED AND OTHER OFFICERS OF THE UNITED STATES PUBLIC HEALTH SERVICE

APRIL 20, 1927

Sanitary Engineer L. C. Frank—Bureau orders of April 8, 1927, amended so as to direct him to stop at Washington, D. C., on return to station from New York City, for conference at the Bureau regarding milk studies—April 11, 1927.

Passed Assistant Surgeon R. L. Lawrence—Relieved from further duty at Manila, P. I., and assigned to duty at United States Quarantine Station, Angel Island, Calif.—April 13, 1927.

Surgeon Lawrence Kolb—Directed to proceed from Washington, D. C., to Owings Mills, Md., April 19, and return, in connection with field investigations of mental hygiene—April 14, 1927.

Assistant Surgeon G. J. Van Beeck—Directed to proceed from Washington, D. C., to Owings Mills, Md., April 19, and return, in connection with field investigations of mental hygiene—April 14, 1927.

Associate Sanitary Engineer W. H. W. Komp—Directed to proceed from Greenwood, Miss., to Mound, La., April 20, and return, in connection with field investigations of malaria—April 16, 1927.

Acting Assistant Surgeon L. M. Taylor—Relieved from duty at Tuxpam, Mexico, and assigned to duty at United States Quarantine Station, Galveston, Texas—April 16, 1927.

Chief Pharmacist C. H. Bierman—Directed to proceed from Perry Point, Md., to Washington, D. C., and return, during the week of April 18, for conference at the Bureau—April 16, 1927.

Passed Assistant Surgeon Kenneth F. Maxcy—Directed to proceed from Washington, D. C., to New Orleans, La., April 23, and return, in connection with field investigations of typhus fever—April 19, 1927.

C. C. PIERCE, Acting Surgeon General.

## REPORTS AND NOTICES OF MEETINGS

### AMERICAN ACADEMY OF PHYSIO-THERAPY

THE American Academy of Physiotherapy will hold the mid-year meeting Monday and Tuesday, May 16 and 17, 1927, at the Lee House, Fifteenth and L Streets, Washington, D. C.

### Scientific Session

President's Address. Slides and Moving Pictures of Some Cases Treated at the Rehabilitation Clinic of the Etna Life Insurance Company.—Charles P. Hutchins, M.D., Syracuse, N. Y.

"Peripheral Facial Paralysis."—Frank B. Granger, M.D., Boston, Mass.

"Twenty-five Years' Experience With Physical Measures, Including a Synopsis and History."—Frank A. Davis, M.D., New York, N. Y.

"Physical Measures in Dermatology."—William D. McFee, M.D., Haverhill, Mass.

AFTERNOON SESSION (1:30 O'CLOCK)

### Scientific Session

#### Symposium on Electrosurgery

"X-ray and Radium Treatment of Carcinoma of the Cervix Uteri."—Robert E. Fricke, M.D., Baltimore, Md. (by invitation).

"Advantages of Removing Primary Malignant Growths of the Oral Cavity With Surgical Diathermy in Preference to Radiation."—Charles Reid Edwards, M.D., Baltimore, Md. (by invitation).

"Combined Methods of Treatment in Breast Carcinoma."—William L. Clark, M.D., Philadelphia, Pa.

"Electrothermic Methods in Diseases of the Rectum."—Howard A. Kelly, M.D., Baltimore, Md.; Grant E. Ward, M.D., Baltimore, Md.

TUESDAY, MAY 17, 1927—MORNING SESSION  
(9:30 O'CLOCK)

### Scientific Session

"Pictorial Physiotherapy."—Harold D. Corbusier, M.D., Plainfield, N. J.

Informal Address.—Ray Ryman Wilbur, M.D., Stanford University, California (by invitation).

"Observations on the Treatment of Arthritis."—Harry C. Westervelt, M.D., Pittsburgh, Pa.

"Galvanism in Cerebral Conditions."—John J. MacPhee, M.D., New York City (by invitation).

AFTERNOON SESSION (2:00 O'CLOCK)

Physical Therapeutic Clinic, Walter Reed General Hospital, Tacoma Park, Washington, D. C.

Through the courtesy of General James A. Kennedy, under the direction of Major H. D. Offutt, there will be demonstrations of physical therapeutic technique on the routine clinical cases of this hospital.

An attempt will be made to secure transportation by bus for those registering for the same not later than the end of the session, Monday afternoon.

### THE ANNUAL MEETING OF THE NORFOLK SOUTH DISTRICT MEDICAL SOCIETY

THE Annual Meeting of the Norfolk South District Medical Society will be held at 12 noon on Thursday, May 5, 1927, at the Norfolk County Hospital, South Baintree.

The Board of Censors will meet on that day at the same place at 11:00 A. M.

N. R. PILLSBURY, Secretary.

### THE APRIL MEETING OF THE WORCESTER DISTRICT MEDICAL SOCIETY

THE April meeting of the Worcester District Medical Society was held at the Grafton State Hospital on Wednesday evening, April 13, 1927.

A very satisfying buffet supper was served at six o'clock in the lobby of the Administration building.



After a short business meeting, President Trowbridge introduced Dr. George B. Magrath, medical examiner of Suffolk County, as the speaker of the evening. Dr. Magrath spoke on "Some Professional Experiences." These experiences included some very hair-raising mysteries of murder and incendiarism. The talk was illustrated with lantern slides.

Dr. Magrath certainly proved very interesting to us all and the society certainly appreciated his willingness to give us this talk.

The meeting was adjourned at 9:30.

The annual meeting will be held May 11, at the Worcester Country Club.

EARL E. FIPPEN, *Reporter*.

#### NEW ENGLAND HEART ASSOCIATION

THE meeting of the New England Heart Association will be held May 26, 1927, in John Ware Hall, Boston Medical Library, 8 The Fenway, Boston, Mass. 7:45 P. M., Annual Business meeting. 8:15 P. M., Medical meeting, 1. Introductory Remarks. Dr. John A. Ceconi, Boston. 2. The Report of the Cardiac Survey in the Public School Children of Boston. Dr. Burton E. Hamilton, Boston.

#### BOSTON ORTHOPEDIC CLUB

THERE will be a meeting of the Boston Orthopedic Club in the Sprague Hall of the Boston Medical Library on Wednesday evening, May 11, 1927, at 8:15 P. M.

##### PROGRAM

1. Milk Borne Epidemics of Poliomyelitis. Dr. W. L. Aycock, Boston.
2. The Treatment of Bone and Joint Affections at S. Nicholas and S. Martin's Hospital, Pyrford, England. Mr. W. Rowley Bristow, Orthopedic Surgeon to St. Thomas Hospital, London, England.

R. K. GHORMLEY, *Secretary*.

#### ANNUAL MEETING OF THE MIDDLESEX SOUTH DISTRICT

THE Middlesex South District of the Massachusetts Medical Society held its annual meeting on April 20 at the Colonial Club, Cambridge.

The following officers were elected for the ensuing year: Dr. Augustus W. Dudley of Cambridge, president; Dr. Fresenius Van Nuys of Weston, Vice President.

An historical paper entitled "Heritage of Middlesex Society," was read by Dr. Dwight O'Hara of Waltham. Great appreciation was expressed by the Society to Dr. O'Hara for his paper.

The meeting adjourned at 1 o'clock for dinner.

#### MEETING OF THE ASSOCIATED BOARDS OF HEALTH OF THE SOUTHEASTERN MASSACHUSETTS DISTRICT

At the spring meeting of the Associated Boards of Health of the Southeastern Health District at Hyannis on Wednesday, April 20, the principal subject for discussion was "Eradication of Mosquitos on the Cape." The principal speaker was Anselmo F. Dappert, assistant state sanitary engineer, of Springfield, Ill.

Mr. Dappert called attention to the great diversity of the problems even in places close together, demanding essentially different treatment. The first necessity, therefore, is to make some kind of survey of the place. It was further acknowledged that on Cape Cod, suppression of the mosquito appears not to be as yet a health problem, since the conditions for malaria are not present. It is however important as a matter of convenience and economics.

The speaker outlined the general situation, some 200 species in the country, breeding in different places, some in swamps, and others in salt water, polluted water and sluggish streams, respectively. Eggs are laid in small groups of separated ones up to rafts of thousands. They all follow the same general method of development, two to three days each in the stages of egg, wriggler and pupa with a total life of about thirty days. The flight of the mosquito is usually not more than one mile. Communities therefore have a home-grown product.

There are several general means of control which may be exercised before the mosquito is ready to fly, drainage, which will deprive it of breeding places; oil sprayed on the water, and creatures that will eat the larvae, a minnow, (*Gambusia*,) being the one just now most favorably considered.

Speaking of the results in a small place in southern Illinois, Mr. Dappert stated that the program included a meeting of the citizens for explanation, and next the survey of the district including every breeding place within three miles of the city. Here the situation was bettered to the satisfaction of the citizens. At Ravinia Park, just north west of Chicago, in 1924 the mosquitos rose in clouds, so that it was necessary to close the park during breeding season. The speaker had been bitten 100 times in passing through in an auto. Back of the park was a valley notably infested with the pests. Oiling and cutting of brush improved the situation and last year the public attendance increased about thirty per cent.

Calling attention to the unfortunate effect of sporadic containers like gutters, rain barrels, cisterns, etc., which should be tabulated in the survey if not removable, and emphasizing the fact that the sources nearest the place are most troublesome, the speaker declared no situation to be hopeless. Incidentally in his talk he spoke

of the comparative ease and economy in ditching by means of dynamite.

A statement of what is being done by the Cape Cod Mosquito Committee, Mr. Bond, who is chairman of the committee stated that seven towns have contributed \$6,300 for the work, and the committee is making a survey. During this, it should be understood, places that are obviously, important breeding places are attacked immediately. The president of the association W. Fred Delano, health officer of Fairhaven, exhibited a map showing the proposed operations of a private committee in his town. Dr. P. J. Eaton of Provincetown stated that a general survey had been made in two or three days and the more important breeding places attacked. There had been notable coöperation, garages supplying oil, teamsters carrying it to the scenes of work with volunteer aid from citizens.

A vote of the meeting was taken in support of the plans of the Cape Cod Mosquito Committee. Dr. Clarence L. Scamman of the Massachusetts State Department of Public Health spoke briefly on diphtheria and milk.

#### HARVARD MEDICAL SOCIETY MEETS

PRESENTATION of cases and a lecture by Professor Francis G. Benedict, Director of the Carnegie Nutrition Laboratory, on "Some Recent Research on the Production and Loss of Heat in the Human Body," comprised the program of the last Harvard Medical Society meeting, held Tuesday evening, March 15, at the Peter Bent Brigham Hospital.

Dr. Putnam of the hospital presented the first case, which was that of a girl 14 years of age, who entered the hospital complaining of staggering and failing vision. Examination showed a very high choked disc, and a questionable Romberg's sign. A cerebellar operation revealed a tumor filling the fourth ventricle, which was removed. The patient was shown on account of her febrile reaction. The evening of her operation her temperature rose to 104°. A lumbar puncture was done and about 35 c.c. of clear cerebrospinal fluid withdrawn, with subjective relief and temperature decrease to 100°. Four days after the operation her temperature had again reached 104°. Another lumbar puncture was performed and her temperature returned to normal.

Dr. Cushing in commenting on the case stated that this febrile condition following operation was most common in hydrocephalus, due in all probability to a disturbance of the nerve centers which control temperature. Also that this reaction is much more apt to occur in children with cerebellar tumors than in any other people.

The next case, presented by Dr. Higgins of the Medical Service, was a man of 38, a painter, who entered the hospital complaining of pain and weakness of the left side of his body. Past history revealed a spinal injury from a ladder fall, which has caused hip pains occasionally ever since. Several months ago he experienced severe hip pains different in character from those ever experienced before, and

these persisted for several days, giving place to severe pain starting over the left chest and descending down the left side of his body, centering at the hips, and passing on down the left leg. The attacks have recurred up to the present, each persisting for five to twenty minutes. Coincident with the onset of the initial attack he experienced and has since experienced a weakness of the entire left side of the body. Examination showed there was an inability to maintain convergence, and a definite hippus was demonstrated. The left side of the body showed an anaesthesia dolorosa. There were increased reflexes on this side of the body. He had no Babinski or ankle clonus, and his Romberg sign was negative. Hemiplegia was further evident in his left leg on walking.

Dr. Sosman in commenting on the case said: "He has a thalamic syndrome, and this peculiar type of pain, with the anaesthesia dolorosa, his weakness and hemiplegia, together with the fact that he is painter and works in lead, makes it possible that it is a visceral affair, and that the lead has something to do with the etiology.

The last case, presented by Dr. Cairns, a man of 41, a photographer, entered the hospital complaining of headache, failing vision and memory of several months' duration. General examination showed no abnormality, but neurological examination revealed bilateral papilledema, the right disc having a 2½D swelling, this being the cause of the failure of vision. He had a general slight left-sided weakness. Examination of the visual fields showed a left homonymous hemianopsia with splitting of the macula, indicating therefore a lesion in the right cerebral hemisphere, probably a tumor. X-ray showed no lesion of the pituitary, and a ventriculogram showed both ventricles to be dilated and displaced to the left, indicative of a tumor of the right occipital lobe. Several days after the ventriculogram he suddenly had very alarming symptoms—he became unconscious, his respiration dropped to four per minute, and corneal reflex was absent. He was immediately given hypertonic salt solution intravenously, and also a subtemporal decompression was done to relieve the increase in intracranial pressure. A few days later his right occipital lobe was explored, and showed surface bulging and tenseness, indicative of an underlying cyst. Puncture showed a milky fluid, and excision showed it was a hydatid cyst of the exogenous type, the daughter cysts being outside it. Since the operation the patient has run a temperature of 102° to 104° (three weeks), and only now it is beginning to fall. The cause of the elevation in temperature in this and similar cases is not yet fully understood.

Dr. Benedict was then introduced by Dr. Sosman. Dr. Benedict has just returned from a long sojourn in Europe, where he gave lectures in various of the larger Universities on "Production and Loss of Heat in the Human Body."

Dr. Benedict began his lecture by saying that the direct measurement of heat has always been one of the greatest stumbling blocks in studying the physiology of living animals. The respiratory calorimeter devised by Professor Atwater was the first approach to this problem. This instrument while measuring fairly accurately the heat given off by radiation, convection, and conduction, did not include the heat of vaporization of water, which represents about 25% of the total heat by a human at rest. In

order to measure the water vaporized and at the same time to maintain the air in the chamber in a respirable condition, considerable ventilation of the apparatus and the absorption of the water and carbon dioxide given off by the body of the subject, are necessary. Thus, such an apparatus combines a calorimeter and a respiratory chamber.

By means of such an apparatus many intricate chemical and energy transformations can be investigated. This apparatus determines with great accuracy the water vaporized, heat elimination, carbon dioxide production and oxygen consumption. Experiments have been carried on mostly with humans to determine the normal metabolism, and heat loss. It has been found that about 25% of the heat given off by a resting man is required to vaporize the water constantly escaping from the lungs and skin. The heat lost by radiation, convection, and conduction depends upon the temperature potential between the skin and the environmental air. The skin temperature may rise during severe work, but direct radiation does not suffice to remove the heat produced, and the vaporization of water assumes a continuously increasing role as the work becomes more strenuous until, with the most severe work, one half of the total heat may be given off as the latent heat of water vaporized.

Dr. Benedict's experiments reveal that there is an insensible loss in weight in the body, of from 25 to 40 grams per hour, and that the total insensible loss in weight per hour is closely proportional to the total metabolism. The skin loss is given as about 50% of the total loss. As to the factors that influence this loss, it has been found that at room temperature, the loss when nude is no greater than when clothed, that blasts of air of room temperature over the nude body do not alter the loss, and that increase in the room temperature up to the point of visible perspiration has no influence. But very moderate exercise increases the insensible loss. Thus the insensible loss from the skin seems to be a fixed factor, even with extraordinary changes in the environment.

The nature of the insensible loss has been studied experimentally by separating the skin loss from that of the lungs by the use of a respiratory appliance which undergoes no change in weight during the weighing of the subject, so that any loss in weight is due solely to skin loss. The skin loss is due practically exclusively to water, since but a negligible amount of  $\text{CO}_2$  is excreted from the skin. The lung loss as revealed by the respiratory appliance is made up of water vapor and  $\text{CO}_2$ , which are determined quantitatively by collecting the expired water vapor in sulphuric acid and the  $\text{CO}_2$  in soda-lime. By weighing the oxygen cylinder used in the respiratory apparatus before and after the

experiment, the weight of oxygen entering into the metabolism is known. The two factors which determine the loss of water from the lung are, first, the volume of expired air, which depends in turn upon the second factor, the volume of inspired air. The most difficult factor to determine is the temperature of the expired air.

Direct calorimetry measures the heat eliminated. Since the skin temperature is of the greatest importance in regulating heat loss, a study of the skin temperature is vital to the comparison of heat production and heat loss. The skin temperature is secured by using the sensitive thermo-electric method combined with the aperiodic galvanometer of Einthoven. Women on the average show a much lower skin temperature than men, hence the average heat production of man is larger than that of woman. Experiments by Dr. Benedict further revealed that the temperature of the skin is actually lowered by exercise, and moving air over the body tends to reduce the skin temperature. He also found that when the skin temperature falls the internal or deep body temperature rises. Dr. Benedict stated that skin temperature measurements are destined to have an important significance in pathology.

Dr. Benedict's experimental studies have been extended to include practically every common animal. Much work has been done on the influence of environmental temperature, diets, sex, size of thyroid gland, and fasting on the metabolism of the animal.

In discussing the factors which influence the basal metabolism in the human, Dr. Benedict mentioned respiratory irregularities, sleep, diet, surface area of the body, exposure to cold, and shivering.

The possibility of computing the heat production with great accuracy from the measurement of the oxygen consumption alone makes gas analysis unnecessary in a large majority of experiments. Here all that is necessary is a metal can containing the absorbent for  $\text{CO}_2$ . In work and walking experiments this apparatus is carried by the subject. The respiratory quotient can be determined by analyzing a continuous sample of the expired air, and the oxygen consumption, by referring the respiratory quotient thus obtained to the volume of  $\text{CO}_2$  produced per minute.

Observations from metabolism studies on Mount Holyoke College girls and at Teachers' College, N. Y., with Oriental women, showed that the latter had regularly a basal metabolism of 11% lower than that of the former. Since the measurements on these Oriental women did not involve the effects of unusually low protein intake, under nutrition, or thyroid deficiency, they indicate a true racial difference in metabolism.

Throughout Dr. Benedict's lecture lantern slides of apparatus, experiments, and data, were shown.

#### SOCIETY MEETINGS

##### DISTRICT MEDICAL SOCIETIES

##### Essex North District Medical Society

Thursday, May 5, 1927—Censors meet for examination of candidates at Hotel Bartlett, 95 Main Street, Haverhill, at 2 P. M.

##### Essex South District Medical Society

Thursday, May 5, 1927—Censors meet for examination of candidates at the Salem Hospital, 3:30 P. M.  
Wednesday, May 11, 1927—Annual meeting. The Tavern, Gloucester. Speaker and subject to be announced later.

##### Middlesex South District Medical Society

The Censors of the Middlesex South District of the Massachusetts Medical Society will meet on May 5 at 4 P. M. at the Colonial Club, 20 Quincy Street, Cambridge, for the examination of candidates.

STEPHEN M. BIDDLE, Secretary.

##### Norfolk District Medical Society

Below are the proposed meetings of the Norfolk District for the remainder of the year. Minor changes may be made in case of necessity.

May 10, 1927—Annual meeting. Details of meeting to be announced

Notices of meetings must reach the JOURNAL office on Friday preceding the date of issue in which they are to appear.

## OBITUARY

### GEORGE T. TUTTLE, M.D.

DR. GEORGE THOMAS TUTTLE was born in Northwood, N. H., March 18, 1850. He died April 6, 1927, after a brief illness from pneumonia, at the age of 77 years. He is survived by his wife, who was Miss Celeste Weed Albright, of Dorchester. His parents were Thomas Tuttle, M.D., and Olive Furber Garland.

Upon graduating from Dartmouth College in 1872 he became principal of Pinkerton Academy, Derry, N. H., where he taught for two years. In 1874 he entered the Harvard Medical School and took the regular three years' course, followed by a medical house-officership at the Boston City Hospital. He took his degree of M.D. in 1878. After brief services as House Physician to the Free Hospital for Women, then on Brookline St., Boston, and as Assistant Superintendent and Admitting Physician at the Boston City Hospital, he went on April 15, 1879 to McLean Hospital (then called McLean Asylum, situated in Somerville) as Assistant Physician.

For the next twenty-five years Dr. Tuttle was the efficient collaborator with Dr. Edward Cowles, the Superintendent, in the conversion of the Asylum into a hospital; in the organization and conduct of the first training school for nurses to be operated in a mental hospital; in the establishment of laboratories and scientific re-

search in the hospital; in the preparation, completion and realization of the plans for the new buildings at Waverley; and in the introduction and development of new, and improvement of old, methods of caring for mental patients. During the fifteen years of his own Superintendency, which began January 1, 1904 upon Dr. Cowles' retirement, he carried on the policies already under way. The number of buildings for patients was increased, and radical improvements were made in some of those already built. Upon his resignation on April 15, 1919 he was elected to membership on the Board of Trustees, an honor which was especially gratifying to him. In 1921, owing to disabilities which kept him from attending Board meetings regularly, he resigned this position after forty-two years of continuous service to McLean Hospital.

From 1905 to 1912 Dr. Tuttle was Clinical Instructor in Psychiatry at Harvard Medical School. In 1908 he was appointed by the Governor as Chairman of a commission to revise and codify the laws relating to the insane. Some of its recommendations have influenced legislation for mental patients in other states. In 1917 and 1918 he was President of the Middlesex South District Medical Society, and was Chairman of the local Auxiliary Medical Defense Committee during the War.

Dr. Tuttle was a member of the American Medical Association, of the American Psychiatric Association, of the New England Society of Psychiatry, of the Massachusetts Psychiatric Society, and of the Boston Society of Psychiatry and Neurology. He was President of the latter in 1906. Though not a voluminous writer, he was author of a few papers, chiefly on clinical subjects, and also on administrative topics; most of them were published in the *American Journal of Insanity* as it was then named.

So much for externals. The man himself was modest, even retiring, never seeking notice or publicity. He did not reach out for responsibility, but neither did he seek to avoid it; when it came he met it fully and conscientiously. He was a devoted son and brother. Dr. Tuttle was quiet, dignified, deliberate in manner, methodical in his ways, but not at all inflexible. He was fond of art and music, and enjoyed the rewards of travel, though not its discomforts. He was matter-of-fact, and had a particularly well-balanced judgment and shrewd common sense, much relied upon by his associates and patients. He had, besides, unusual insight into, understanding of, and sympathy with all who came to him for counsel. These qualities, together with his unflinching gentleness, his consideration for others' feelings, and his utter sincerity, inspired all with utmost confidence in him, and especially gave him a place in the hearts and memories of innumerable patients such as it falls to the lot of few physicians to hold. He truly ministered to the mind diseased.



## LEGISLATIVE NOTE

### CHANGES IN THE WORKMAN'S COMPENSATION ACT

To the Editor,  
BOSTON MEDICAL AND SURGICAL JOURNAL.

Dear Doctor:

Enclosed is a copy of the bill signed by the Governor, making changes in the Workmen's Compensation Act.

You will note the paragraphs which are to be inserted in the places indicated, in addition to what is already printed, then appear in italics.

These amendments become effective ninety days from the date of approval, the Governor's approval being given on April 27, 1927. The effective date, therefore, is July 26, 1927.

Yours very truly,

FRANCIS D. DONOGHUE, M.D.,

Medical Adviser to the Department of  
Industrial Accidents.

#### SENATE No. 298

[Substitute by amendment for Senate Bill  
No. 239]

An Act making Certain Changes in the Work-  
men's Compensation Act.

*Be it enacted by the Senate and House of  
Representatives in General Court assembled,  
and by the authority of the same, as follows:*

SECTION 1. Section twenty of chapter one hundred and fifty-two of the General Laws is hereby amended by adding the following sentence:—All medical records and reports of hospitals, clinics, and physicians of the insurer or of the employee shall be open to the inspection of the department so far as relevant to any matter before it,—so as to read as follows:—*Section 20. Copies of hospital records kept in accordance with section seventy of chapter one hundred and eleven, certified by the persons in custody thereof, to be true and complete, shall be admissible in evidence in proceedings before the department or any member thereof. The department or any member before admitting any such copy in evidence may require the party offering the same to produce the original record. All medical records and reports of hospitals, clinics, and physicians of the insurer or of the employee shall be open to the inspection of the department so far as relevant to any matter before it.*

SECTION 2. Section twenty-four of said chapter one hundred and fifty-two is hereby amended by inserting after the word "law" in the second line, the words:—*or under the law of any other jurisdiction in respect to an injury therein occurring,—and by striking out, in the eighth line, the words "at common law" and inserting*

*in place thereof the words:—as aforesaid,—so as to read as follows:—Section 24. An employee of an insured person shall be held to have waived his right of action at common law or under the law of any other jurisdiction in respect to an injury therein occurring, to recover damages for personal injuries if he shall not have given his employer, at the time of his contract of hire, written notice that he claimed such right, or, if the contract of hire was made before the employer became an insured person, if the employee shall not have given the said notice within thirty days of notice of such insurance. An employee who has given notice to his employer that he claimed his right of action as aforesaid may waive such claim by a written notice, which shall take effect five days after it is delivered to the employer or his agent. The notices required by this section shall be given in such manner as the department may approve.*

SECTION 3. Section twenty-six of said chapter one hundred and fifty-two is hereby amended by inserting after the word "employment" in the fourth line the words:—*or arising out of an ordinary risk of the street while actually engaged, with his employer's authorization, in the business affairs or undertakings of his employer, and whether within or without the commonwealth,—and by adding the following:—; provided, that as to an injury occurring without the commonwealth he has not given notice of his claim of rights of action under the laws of the jurisdiction wherein such injury occurs,—or has given such notice and has waived it,—so as to read as follows:—Section 26. If an employee who has not given notice of his claim of common law rights of action, under section twenty-four, or who has given such notice and has waived the same, receives a personal injury arising out of and in the course of his employment, or arising out of an ordinary risk of the street while actually engaged, with his employer's authorization, in the business affairs or undertakings of his employer, and whether within or without the commonwealth, he shall be paid compensation by the insurer, as hereinafter provided, if his employer is an insured person at the time of the injury; provided, that as to an injury occurring without the commonwealth he has not given notice of his claim of rights of action under the laws of the jurisdiction wherein such injury occurs, or has given such notice and has waived it.*

SECTION 4. Section twenty-nine of said chapter one hundred and fifty-two, as amended by chapter one hundred and sixty-three of the acts of nineteen hundred and twenty-three and by chapter two hundred and seven of the acts of nineteen hundred and twenty-four, is hereby further amended by adding at the end of the first sentence the words:—*but except under section thirty-five no compensation shall be paid for any period for which any wages were earned,*

—so as to read as follows:—*Section 29.* No compensation shall be paid for an injury which does not incapacitate the employee for a period of at least seven days from earning full wages, but if incapacity extends beyond such period compensation shall begin on the eighth day after the injury, and if incapacity extends beyond a period of four weeks, compensation shall be paid from the day of injury, but except under section thirty-five no compensation shall be paid for any period for which any wages were earned. When compensation shall have begun it shall not be discontinued except with the written assent of the employee or the approval of the department or a member thereof; provided, that such compensation shall be paid in accordance with section thirty-five if the employee in fact earns wages after the original agreement is filed.

*SECTION 5.* Section thirty of said chapter one hundred and fifty-two is hereby amended by inserting after the word "cases" in the third line the words:—, or cases requiring specialized or surgical treatment,—and by inserting after the word "needed" in the sixth line the words:—, together with the expenses necessarily incidental to such services,—so as to read as follows:—*Section 30.* During the first two weeks after the injury, and, if the employee is not immediately incapacitated thereby from earning full wages, then from the time of such incapacity, and in unusual cases, or cases requiring specialized or surgical treatment, in the discretion of the department, for a longer period, the insurer shall furnish adequate and reasonable medical and hospital services, and medicines if needed, together with the expenses necessarily incidental to such services. The employee may select a physician other than the one provided by the insurer; and in case he shall be treated by a physician of his own selection, or where, in case of emergency or for other justifiable cause, a physician other than the one provided by the insurer is called in to treat the injured employee, the reasonable cost of his services shall be paid by the insurer subject to the approval of the department. Such approval shall be granted only if the department finds that the employee was so treated by such physician or that there was such emergency or justifiable cause, and in all cases that the services were adequate and reasonable and the charges reasonable. In any case where the department is of opinion that the fitting of the employee with an artificial eye or limb, or other mechanical appliance, will promote his restoration to industry, it may order that he be provided with such an artificial eye, limb or appliance, at the expense of the insurer.

*SECTION 6.* Said chapter one hundred and fifty-two, as amended in section thirty-one by chapter four hundred and two of the acts of nineteen hundred and twenty-two, is hereby further amended by striking out said section

and inserting in place thereof the following:—

*Section 31.* If death results from the injury, the insurer shall pay the following dependents of the employee wholly dependent upon his earnings for support at the time of his injury, compensation as follows:—

To the widow, so long as she remains unmarried, ten dollars a week if and so long as there is no child; twelve dollars a week if and so long as there is one child of the employee, who is under the age of eighteen, or over said age and physically or mentally incapacitated from earning twelve dollars a week if and so long as there is one such child, and two dollars more a week for each such additional child; and if the widow dies, such amount as would have been payable had she lived shall be paid to the surviving children aforesaid in equal shares; but if such widow remarries, the aforesaid payments to her shall terminate and the insurer shall pay each week to each of such children, if and so long as there are more than five, his or her proportionate part of sixteen dollars, and shall pay to each of such children, if and so long as there are five or less, three dollars a week. The total amount of such payments shall not be more than six thousand four hundred dollars and said payments shall not continue more than four hundred weeks. When weekly payments have been made to an injured employee before his death, the compensation under the foregoing provisions of this section shall begin from the date of the last of such payments but shall not amount to a total of more than six thousand four hundred dollars, including such payments as were made to the injured employee before his death, and shall not continue for more than four hundred weeks from the date of the injury.

In all other cases of total dependency, the insurer shall pay the dependents of the employee wholly dependent upon his earnings for support at the time of injury a weekly payment equal to two thirds of his average weekly wages, but not more than ten dollars nor less than four dollars a week for a period of five hundred weeks from the date of the injury; but in no case shall the amount be more than four thousand dollars. If the employee leaves dependents only partially dependent upon his earnings for support at the time of his injury, the insurer shall pay such dependents a weekly compensation equal to the same proportion of the weekly payments for the benefit of persons wholly dependent as the amount contributed by the employee to such partial dependent bears to the annual earnings of the deceased at the time of his injury. When weekly payments have been made to an injured employee before his death, the compensation under this paragraph to dependents shall begin from the date of the last of such payments, but shall not continue for more than five hundred weeks from the date of the injury.

SECTION 7. Section thirty-four of said chapter one hundred and fifty-two is hereby amended by striking out all after the word "than" in the thirtieth line and inserting in place thereof the words:—*eighteen dollars nor less than nine dollars a week, except that the weekly compensation of the injured employee shall be equal to his average weekly wages in case such wages are less than nine dollars; and the period covered by such compensation shall not be greater than five hundred weeks nor the amount more than forty-five hundred dollars,*—so as to read as follows:—*Section 34.* While the incapacity for work resulting from the injury is total, the insurer shall pay the injured employee a weekly compensation equal to two thirds of his average weekly wages, but not more than eighteen dollars nor less than nine dollars a week, *except that the weekly compensation of the injured employee shall be equal to his average weekly wages in case such wages are less than nine dollars; and the period covered by such compensation shall not be greater than five hundred weeks nor the amount more than forty-five hundred dollars.*

SECTION 8. Section thirty-five of said chapter one hundred and fifty-two is hereby amended by striking out, in the fifth line, the word "sixteen" and inserting in place thereof the word:—*eighteen,*—and by striking out, in the sixth line, the words "four thousand" and inserting in place thereof the words:—*forty-five hundred,*—so as to read as follows:—*Section 35.* While the capacity for work resulting from the injury is partial, the insurer shall pay the injured employee a weekly compensation equal to two-thirds of the difference between his average weekly wages before the injury and the average weekly wages which he is able to earn thereafter but not more than eighteen dollars a week; and the amount of such compensation shall not be more than forty-five hundred dollars.

SECTION 9. Section forty-six of said chapter one hundred and fifty-two is hereby amended by adding at the end thereof the following:—, but an employee who is for any reason peculiarly susceptible to injury or who is peculiarly likely to become permanently or totally incapacitated by an injury may, at the discretion of the department and with its written approval within one month of the beginning of his employment, waive his rights to compensation under sections thirty-four, thirty-five and thirty-six, or any of them,—so as to read as follows:—*Section 46.* No agreement by any employee to waive his rights to compensation shall be valid, but an employee who is for any reason peculiarly susceptible to injury or who is peculiarly likely to become permanently or totally incapacitated by an injury may, at the discretion of the department and with its written approval within one month of the beginning of his employment, waive his rights to compensation under sections thirty-

four, thirty-five and thirty-six, or any of them.

SECTION 10. Section forty-eight of said chapter one hundred and fifty-two is hereby amended by striking out the first sentence and inserting in place thereof the following:—*whenever the department deems it to be for the best interests of the employee or his dependents, and the parties agree, the liability for compensation may be redeemed by the payment in whole or in part by the insurer of a lump sum of an amount to be fixed by the department, not exceeding the amount provided by this chapter,*—so as to read as follows:—*Section 48.* Whenever the department deems it to be for the best interest of the employee or his dependents, and the parties agree, the liability for compensation may be redeemed by the payment in whole or in part by the insurer of a lump sum of an amount to be fixed by the department, not exceeding the amount provided by this chapter. The department may at any time in case of a minor who has received permanently disabling injuries, either partial or total, provide that he be compensated in whole or in part by the payment of a lump sum, of an amount to be fixed by the department, not exceeding the amount provided by this chapter.

SECTION 11. Said chapter one hundred and fifty-two, as amended in section fifty-two by section fourteen of chapter two hundred and sixty-seven of the acts of nineteen hundred and twenty five, and by section fifteen of chapter two hundred and eighty-four of the acts of the current year, is hereby further amended by inserting by striking out said section fifty-two and inserting in place thereof the following:—*Section 52.* Any insurance company authorized to transact business in this commonwealth under sub-division (b) or (c) of the sixth clause of section forty-seven of chapter one hundred and seventy-five may, except as provided in clause (c) of section fifty-four of said chapter, insure the payment of the compensation provided for by this chapter; and when any such company insures the payment of such compensation it shall file with the commissioner of insurance its classifications of risks and premiums relating thereto and subsequent proposed classifications or premiums, which shall not take effect until approved by the commissioner of insurance as adequate and reasonable for the risks to which they respectively apply, provided that upon petition of the company or of any other party aggrieved the opinion of the commissioner shall be subject to review by the supreme judicial court.

The commissioner may withdraw his approval.

SECTION 12. Section sixty-nine of said chapter one hundred and fifty-two, as amended by chapter four hundred and thirty-four of the acts of nineteen hundred and twenty-four is hereby further amended by adding [at the end thereof] the following new sentence:—*The*

terms laborers, workmen and mechanics, as used in sections sixty-eight to seventy-five inclusive, shall include foremen, subforemen and inspectors of the commonwealth or of any such county, city, town or district, to such extent as the commonwealth or such county, city, town or district, acting respectively through the governor and council, county commissioners, city council or the qualified voters in a town or district meeting, shall determine, as evidenced by a writing filed with the department,—so as to read as follows:—Section 69. The commonwealth and any county, city, town or district having the power of taxation which has accepted chapter eight hundred and seven of the acts of nineteen hundred and thirteen shall pay to laborers, workmen and mechanics employed by it who receive injuries arising out of and in the course of their employment, or, in case of death resulting from such injury, to the persons entitled thereto, the compensation required by this chapter. Compensation payable under this chapter to an injured employee of the commonwealth who receives full maintenance in addition to his cash salary or wage, and compensation payable thereunder to his dependents in case of his death, shall be based upon his average weekly wages plus the sum of seven dollars per week in lieu of the full maintenance received by him. Sections seventy to seventy-five, inclusive, shall apply to the commonwealth and to any county, city, town or district having the power of taxation which has accepted said chapter eight hundred and seven. The terms laborers, workmen and mechanics, as used in sections sixty-eight to seventy-five, inclusive, shall include foremen, subforemen and inspectors of the commonwealth or of any such county, city, town or district, to such extent as the commonwealth or such county, city, town or district, acting respectively through the governor and council, county commissioners, city council or the qualified voters in a town or district meeting, shall determine, as evidenced by a writing filed with the department.

SECTION 13. An employee under a contract of hire with an insured person made prior to the effective date of so much of this act as is not affected by section fourteen, shall be deemed to have waived his rights of action to recover damages for personal injuries under the law of any other jurisdiction in respect to injuries therein occurring if he shall not give his employer, within thirty days after said effective date, written notice that he claims such rights.

SECTION 14. So much of section three of this act as extends the provisions of said chapter one hundred and fifty-two to injuries occurring outside the commonwealth shall take effect one hundred and twenty days after its passage.

## BOOK REVIEWS

*Early Days of the Presbyterian Hospital in the City of New York.* By DAVID BRYSON DELAVAN, M.D. Published privately, 1926. 191 pages. Illustrated.

This book reprints the early letters and official documents associated with the founding of the hospital, in 1872, by James Lenox. The main worth of the volume, however, outside of its local interest, will be found in the excellent biographies of prominent Presbyterian Hospital physicians, with their portraits: Oliver White, Willard Parker, Alonzo Clark, Jared Linsly, and many others.

*Health Supervision and Medical Inspection of Schools.* By THOMAS D. WOOD, A.M., M.D. College Physician, Adviser in Health Education, and Professor of Physical Education, Teachers College, Columbia University, etc., and HUGH GRANT ROWELL, A.B., M.D. Physician to the Horace Mann Schools, Lecturer and Assistant Physician, Teachers College, Columbia University, etc. W. B. Saunders Company, Philadelphia and London.

In their introduction the authors state that this book has been prepared "to meet the recognized need of a thoroughly practical comprehensive program of health supervision in school." It does so in a way that puts the book in a class by itself. It is not only comprehensive, but it shows an unusual amount of careful painstaking work in its preparation. It is concise and definite in its language. Its illustrations, blank forms, tables and instructive circulars have always a real practical application and reflect the large personal experience of the authors.

This book is none the less valuable to the small town official because it contemplates a thoroughness of supervision over the health of school children beyond the reach of communities which do not enjoy a relatively high economic prosperity.

*The Natural Processes of Healing in Pulmonary Tuberculosis.* By MARG JAQUEROD, M.D. Translated by J. Denny Sinclair, M.B., Ch.B. William Wood and Company, New York.

Dr. Jaquered is physician in charge of a large sanatorium in Leysin, Switzerland, and the monograph which he has written contains 101 pages with 60 remarkably fine X-ray illustrations and 44 diagrams. The translation by J. Denny Sinclair is an excellent one with the exception of his constant use of unusual adjectives which are distinctly disturbing to the American reader. Among these I might mention the words, "evolutive," "definitive," and "compensative," which are found throughout the text.



Dr. Jaquero's theme is to demonstrate the various methods by which Nature cures a tuberculous process which to a certain extent at least are a little startling. The average physician in this country still clings to the idea that tuberculosis is cured in the vast majority of instances by the formation of fibrous tissue and to a certain extent by calcification. The author of this book feels that in many instances, particularly the more recent and acute cases, cure takes place by resolution as in the various forms of broncho-pneumonia. This resolution, instead of taking some days and weeks requires several months and sometimes more than a year for the completion of this process. He then goes so far as to state that miliary tuberculosis when limited to the lungs undergoes the same process and the reviewer must admit he fairly well substantiates his claims by case records and X-ray plates. The reason why these cures are not often seen is due to the hasty resumption of normal life and the resulting fatigue which leads to a chronic state of affairs instead of a definite cure. He emphasizes the importance of measuring the total amount of expectoration in 24 hours as a guide toward progress in this disease. This point is not sufficiently looked after in either private practice or in our sanatoria. He likewise emphasizes the fact that convalescence as a whole often precedes the cure of the local disease which is apt to lead both physician and patient astray. In his own words, "It is by being guided by the state of the lesions that it is possible to decide that the disease is cured." He considers it necessary to overcure tuberculous patients in order to make certain that a lasting cure is obtained and argues that if it is essential to devote two or three years to the healing of a tuberculous spine, knee or elsewhere why is it not necessary to devote the same time to the treatment of pulmonary disease.

He believes that compensatory emphysema of the healthy lung is a misnomer and that it is a definite hypertrophy of the lung parenchyma, not only the result of the lung to compensate for the diminution of the respiratory field but defects resulting from a more abundant food supply and a more intense nutrition changes as the volume of the lung increases in proportion to the weight of the body. This to most of us is an entirely new conception.

The methods of healing which he discusses are healing by resolution which takes place in most acute processes far more often than we think; by fibrous transformation; by the healing of cavities; healing by pulmonary retraction and displacement of the mediastinum; and calcification, which latter he considers of little or no importance. He is of the opinion that artificial pneumothorax should be used far more often than it is at the present time.

The greater part of the book is devoted to a series of X-ray plates with accompanying dia-

grams and case records which are worthy of careful study. This volume is of distinct value, not only because of these plates, and is well worth serious study.

*Elements of Hygiene and Public Health.* By CHARLES PORTER, M.D., B.Sc., M.R.C.P. (Edin.), etc. Second Edition. Humphrey Milford. Oxford University Press, London and New York.

In this book of four hundred pages, twenty-eight phases of personal hygiene and public health are presented in an unusually readable manner.

While the conception which the author gives regarding the etiology of some diseases and the prevention of others does not embody the latest generally accepted conclusions, the value of the book can not on this account be said to be seriously impaired for the purpose of practical popular instruction.

*The Pathology and Treatment of Diabetes Mellitus.* By GEORGE GRAHAM. Second edition. An Oxford Medical Publication of 230 pages.

An unusually clear, concise and satisfyingly simple exposition of our present knowledge of diabetes. The experimental work since the time of Minkowski is simply and concisely outlined so that the march of progress up to our present frontier is easily followed. The book is conveniently divided into chapters which are complete units, each being an excellent summary of the field it covers. The chapter on "Regulation of Blood Sugar" is an excellent digest of our present understanding of this complicated subject. There is a chapter on "Insulin" which should be read by every physician. The puzzling chemistry of ketosis is simply handled and every reader will finish it feeling that he has a clearer understanding of this difficult subject. Four chapters are given to the principles and details of treatment. An appendix contains many useful tables, charts and methods.

The book seems especially valuable for medical students. It is unusually readable and is especially commendable to physicians who want to understand diabetes without having to wade through long chemical discussions.

*The Treatment of Chronic Arthritis and Rheumatism.* By H. WARREN CROWE, Oxford Medical Publications.

This book is an exceedingly interesting discussion of the vaccine treatment as carried on by one who firmly believes in its efficacy in these difficult arthritic problems. It is written primarily as a detailed guide for the general medical man who wishes to treat these cases with vac-

cine. He does not go into explicit details in this volume of the microbic conception of rheumatism although he states that it is fundamental. A supplementary volume is to follow. He has divided his cases according to microbic infections which he has most commonly found in the different types of arthritis. The two bacteria which he finds the cause of rheumatism are the micrococcus deformans and the various strains of streptococcus, the former being responsible for the rheumatoid arthritis, and the latter for the osteoarthritis, as we call them in this country (infectious, atrophic) and hypertrophic.

The book discusses in detail with considerable clearness the writer's method of use of his vaccine, and states that he secures good results from stock vaccine but warns against this therapy unless extreme care is taken because of the danger of overstepping the patient's power of developing immunity, and so doing more harm than good.

A chapter is devoted to the causes of failure in vaccine therapy which cannot be easily summarized, but which is decidedly worth reading to any who care to use vaccine.

The chapter on Orthopaedics by W. G. MacDonald should be helpful to all who are dealing with these cases where the problem of rest and exercise is a much mooted point.

Both writers feel that many of the relapses are due to autoinoculation from previously infected joints through injudicious use. Dr. Crowe especially warns against massage, manipulation, or any active therapy which might stir up the quiescent foci in joints.

One of the most interesting points in the book is the belief that most of the cases of arthritis are the result of mixed infection with the organisms mentioned above. The last chapter is devoted to the results obtained by vaccine therapy, and is a list of cases. More is promised in the supplement.

The appendix is interesting as giving his technique for obtaining cultures from various parts of the body so that the general medical man who has the facilities of a laboratory can develop these vaccines himself. An interesting theory is propounded that arthritis in different countries is produced by different strains of bacteria which he has been able to locate in patients who have come from other countries. He emphatically states that in his hands and a few of his colleagues the treatment has been highly successful.

It is an interesting book for anyone to read who is making a special study of arthritis.

*Physicians of the Mayo Clinic and Mayo Foundation.* W. B. SAUNDERS Company, Philadelphia and London, 1927. vii + 578 pages.

This publication of nearly six hundred pages

lists all the physicians connected with the Mayo Clinic up to January 1st, 1926—six hundred thirty-five, in all. A brief biography of each man is given, and portraits are inserted. In addition, a bibliography is appended for each individual. The value of this book, of course, is largely historical, although it may have uses as a reference book, especially the bibliographical sections. Two indexes are given. The first is a list of universities and colleges by which the degree of doctor of medicine was conferred and the second is a geographical index.

*Sir William Osler Memorial Volume: Appreciations and Reminiscences.* Bulletin No. IX of the International Association of Medical Museums and Journal of Technical Methods. Second impression, edited by MAUDE E. ABBOTT, M.D., privately issued at 836 University St., Montreal, Canada. xxxix + 634 pages.

The first impression of this book appeared in June, 1926; fifteen hundred copies were printed, all of which have been distributed. A second impression has been issued to supply the demand for this memorial volume. Dr. Maude Abbott, the managing editor, who so successfully gathered the material for the first impression, has made a few corrections and has added a number of papers on Osler, received too late for insertion in the earlier issue. The volume is also augmented by a fine colored print of Sargent's great picture, "The Four Doctors."

This extraordinary volume is full of interest for all who knew William Osler. For those who have come into the field since Osler's death in 1919, this book presents a picture of the greatest physician of the modern era, drawn by Osler's contemporaries, in varying lights and shadows. The size of the volume and the number of contributions indicate, in part, at least, the extent of the Osler circle.

*Health Record for Children.* J. THERON HUNTER, M.D. Baltimore, The Williams and Wilkins Company, 1927.

The purpose of this book, according to the author's preface, is to make it easy for the parent to maintain an accurate record of the health of the child and to enable the physician to treat each complaint of the patient more intelligently, through a knowledge of what has happened in the previous life of the child.

It is essentially a graphic review of the health history for the individual child, containing in its 52 pages, blank charts for family history, past history, birth record, weight record, feeding history, bodily development, illness, artificial immunities and the like. If kept accurately by a conscientious parent or physician it would form a very complete, tabular record. There is a very little interpretative text.